National Weather Service

RFC Operations Team

WFO Staff Survey Results

Question 01: In which region do you work?

- A. 125 - Eastern
- B. 295 - Central
- C. 198 - Southern
- D. 152 - Western
- B. 21 - Alaska Pacific

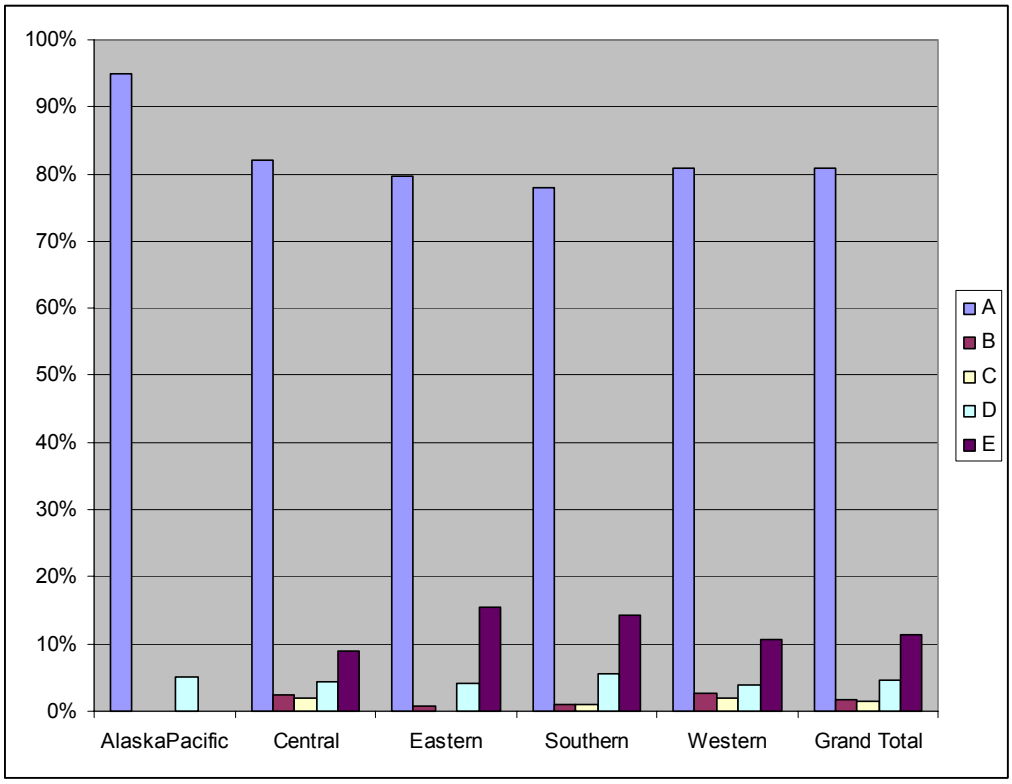
Question 02: What position do you hold?

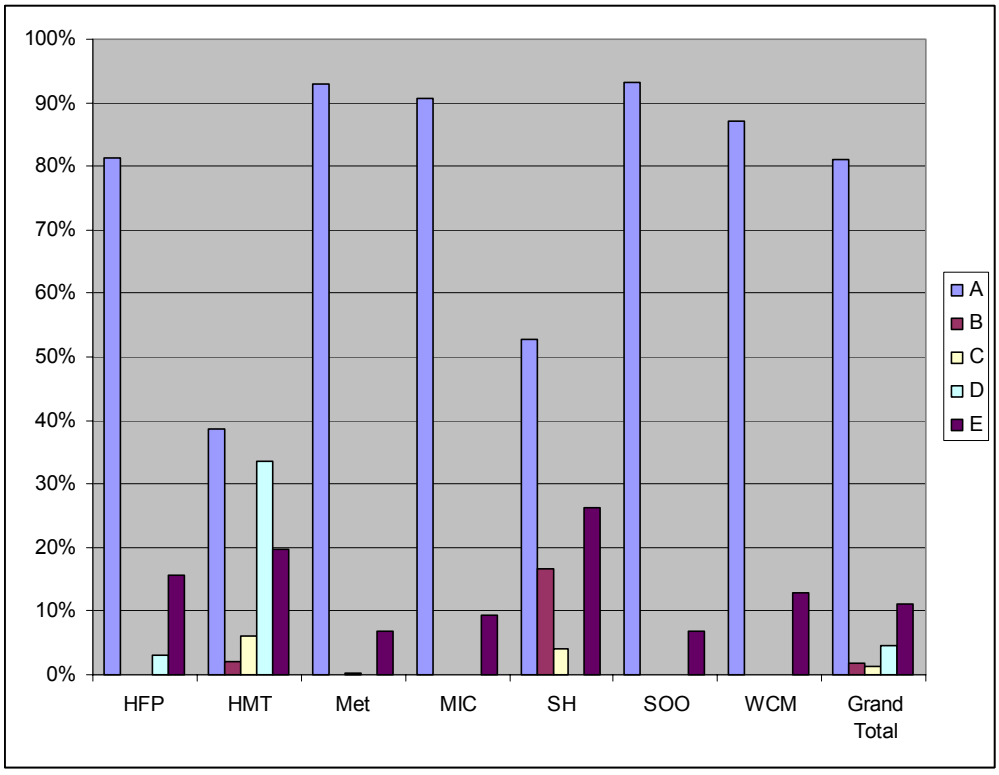
- A. 65 - MIC
- B. 45 - SOO
- C. 47 - WCM
- D. 72 - Service Hydrologist
- E. 415 - Meteorologist
- C. 33 - Hydro Focal Point
- D. 106 – HMT

Note: there were a couple of comments regarding DAPMs and Electronics staff not being included in list

Question 03: What is your educational background?

A. 631 - Meteorology
B. 14 - Hydrology
C. 11 - Other physical science
B. 36 - Other
C. 89 - Meteorology and Hydrology





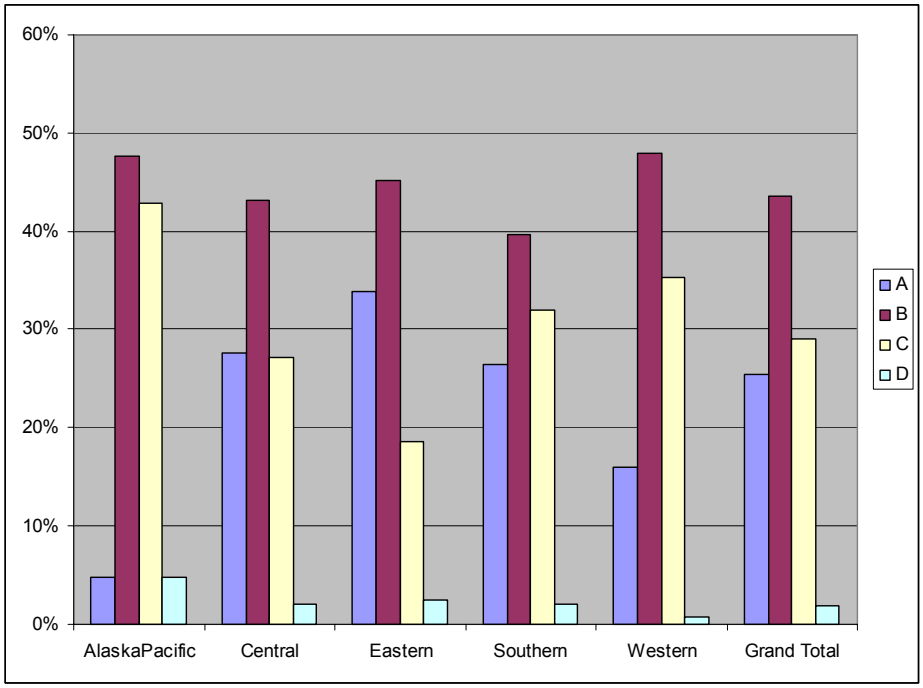
Question 04: My office has an onstation?

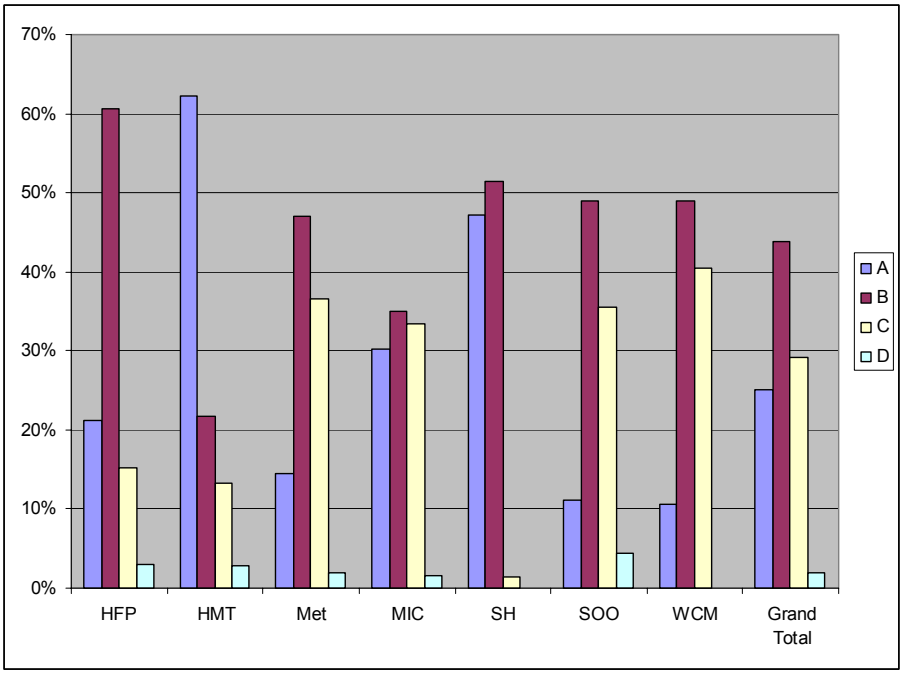
A. 584 - Service Hydrologist

B. 201 - Hydro Focal Point

Question 05: How often do you perform hydrologic functions at your office?

A. 200 - Routinely
B. 344 - Occasionally
C. 228 - Rarely
D. 15 - Never



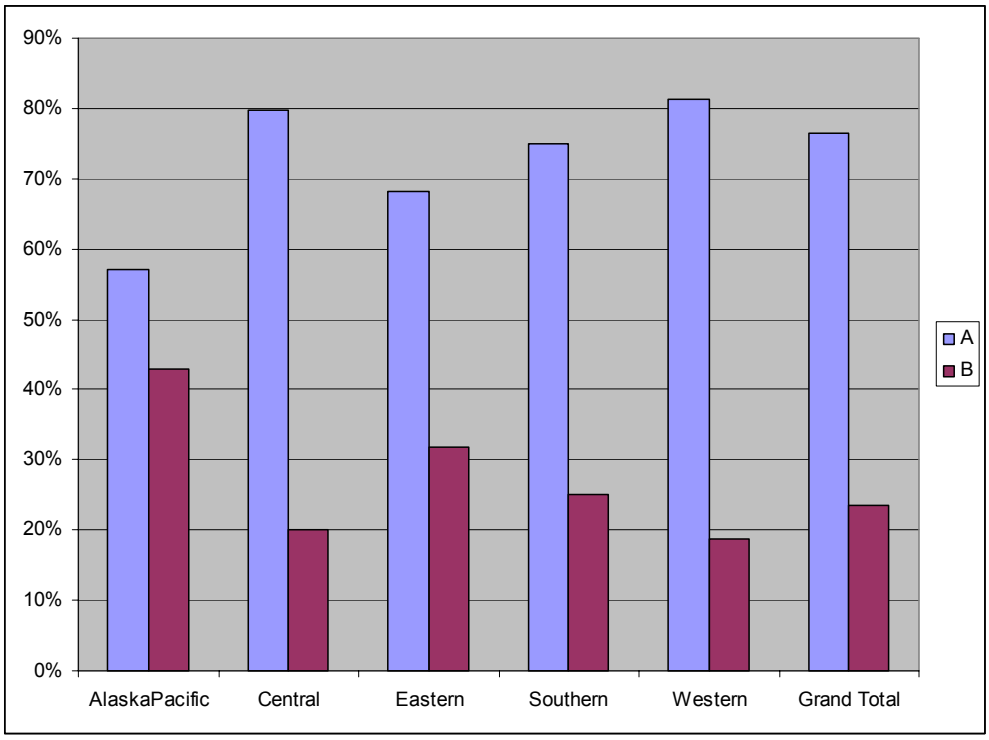


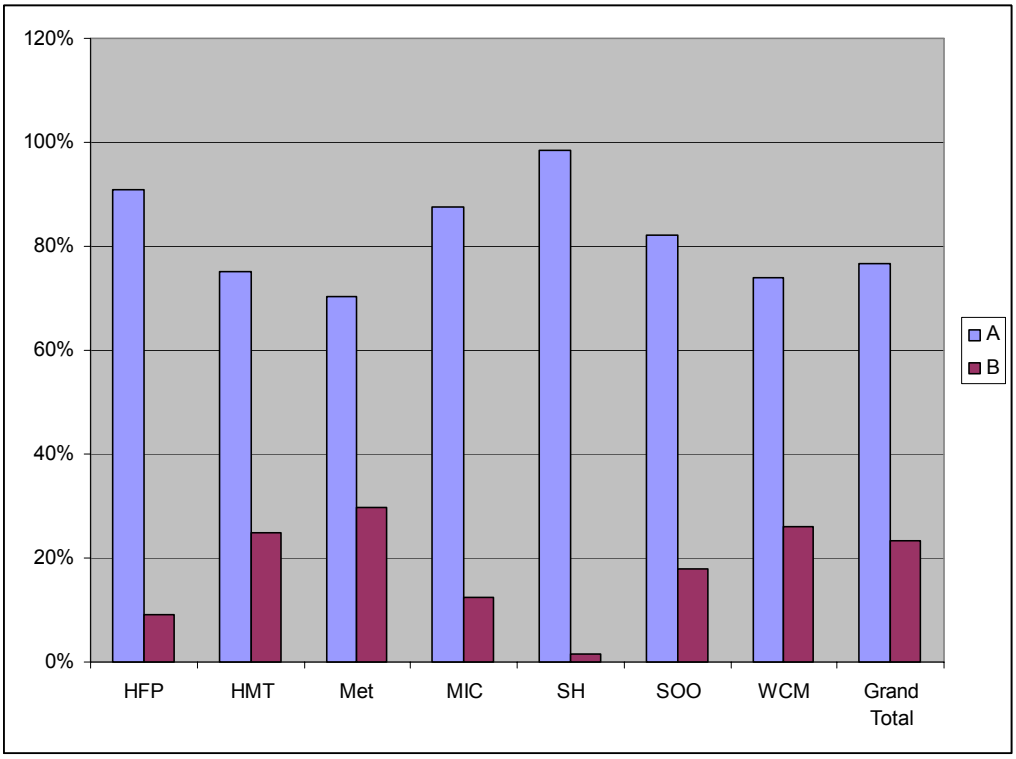
Question 06: Do you feel adequately trained to perform the hydrologic function?

A. 599 - Yes

B. 184 - No

280 text responses



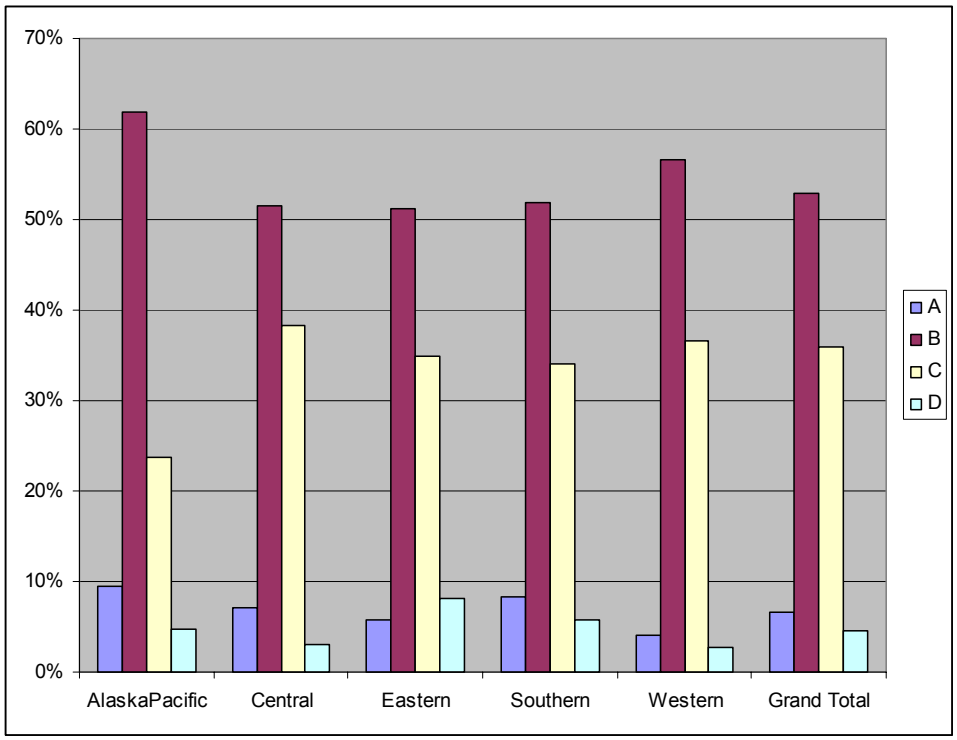


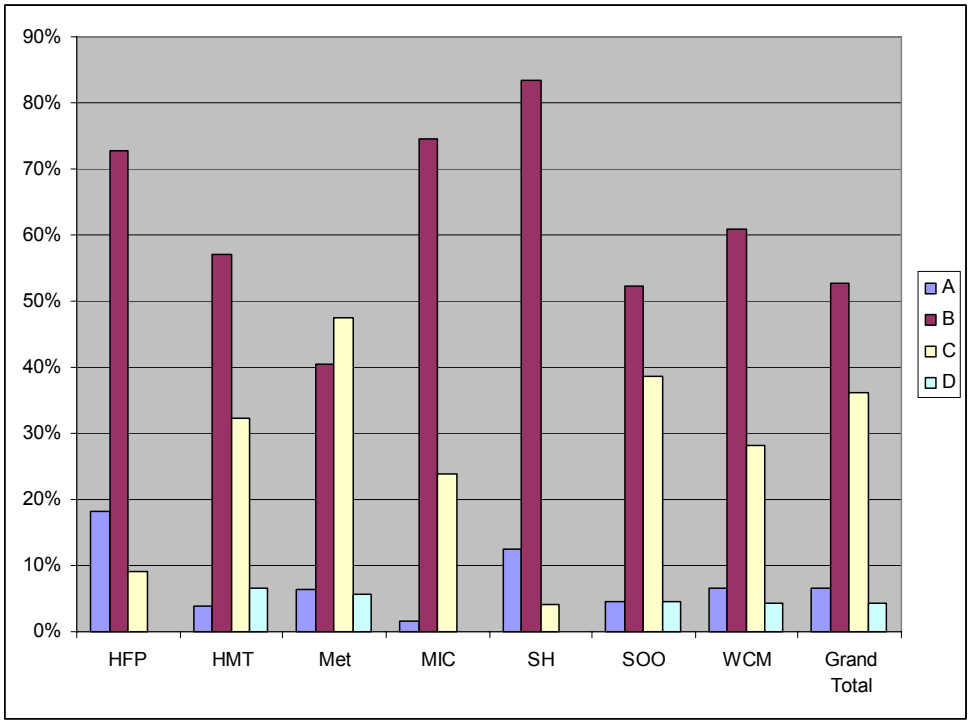
Comments:

- **Wide disparity in responses**
- **SH feel adequately trained**
- **Equal number of responses indicating adequately trained and training was non-existent**
- **Training needs to be looked at in context of roles individuals are playing – this varies by WFO**
  - **Some HMTs indicate they perform most of the functions but are denied NWSTC training**
  - **Forecasters indicate that HMTs are not trained because the forecasters perform the function**
- **Infrequent flooding, particularly in the west, make it difficult to keep up with software changes**
- **Dam Break training needs to be enhanced**
- **Frequent software changes to WHFS may be either welcomed or viewed as confusing**
  - **Level of comfort is a function of SH enthusiasm, ability to train, and time available to develop training program**

Question 07: Which statement best describes your approach in performing hydrologic functions?

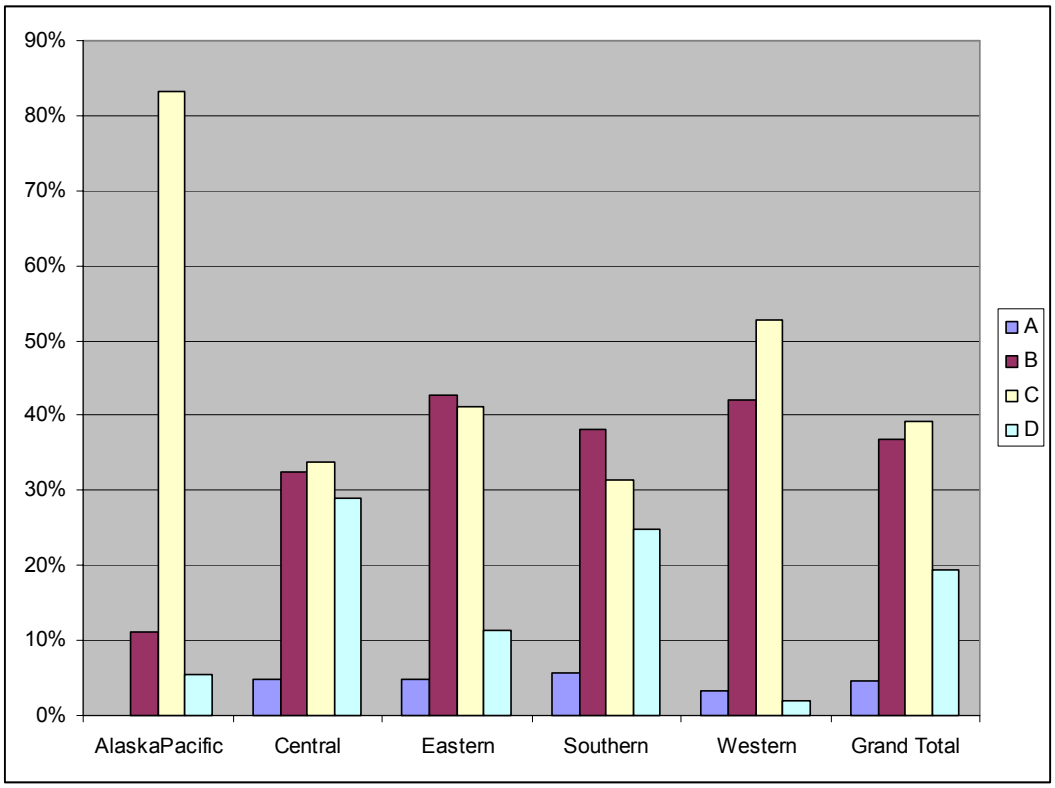
A. 52 - Would consider RFC or OHD job
B. 411 - Enjoy WFO hydro functions
C. 281 - I do the tasks
B. 35 - Task is unnecessary

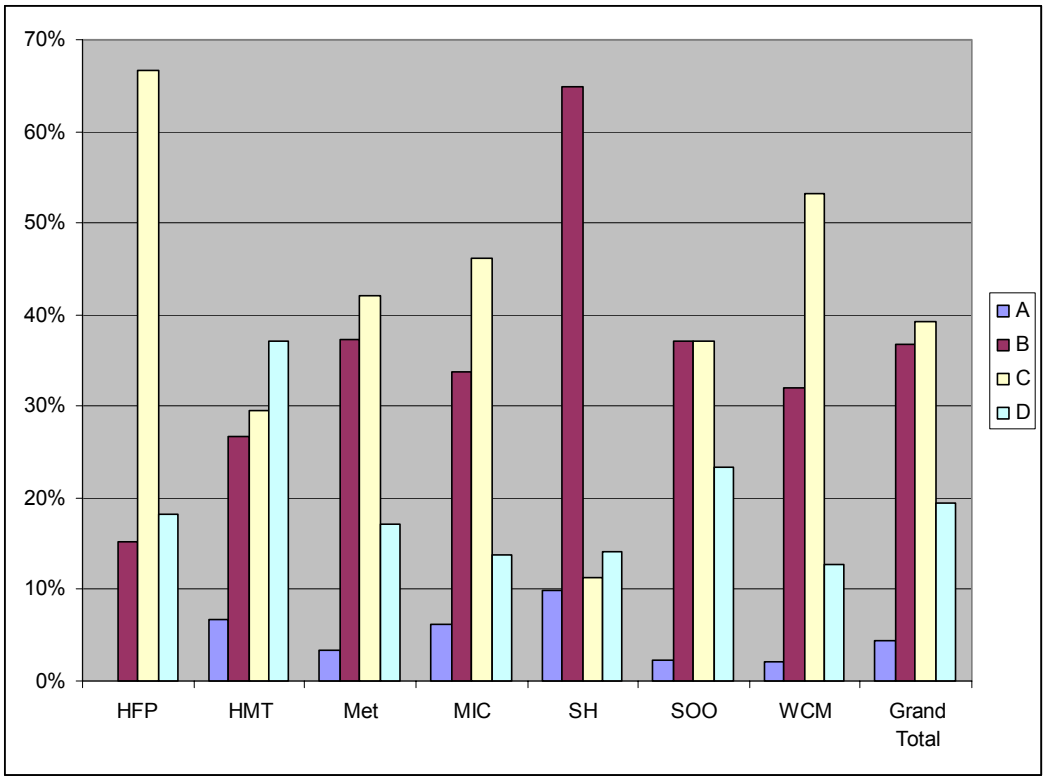




Question 08: When flooding is occurring, who usually completes most of the workload regarding flood warnings?

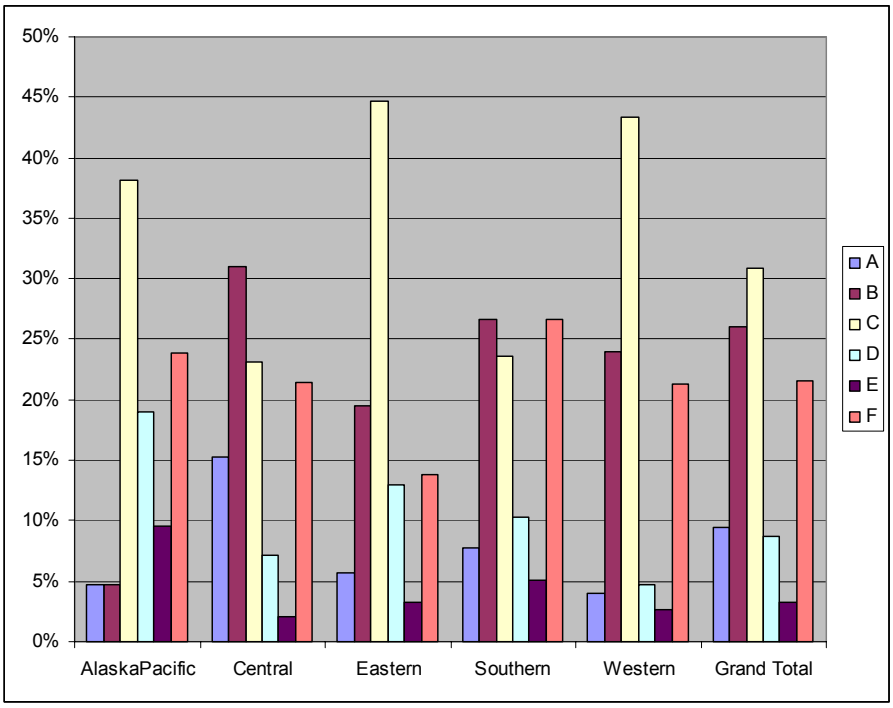
A. 36 - Service Hydrologist prepares all warnings
B. 288 - Service Hydrologist when available
C. 306 - Met Forecasters
D. 153 - HMT staff

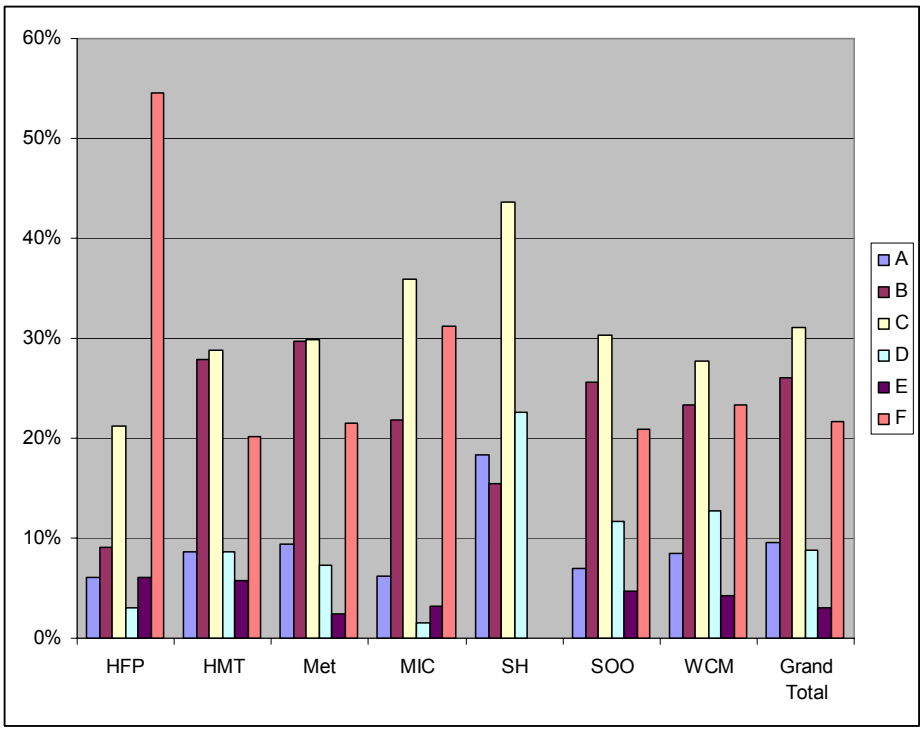




Question 09: What percent of time is the service hydrologist performing operational met or HMT functions?

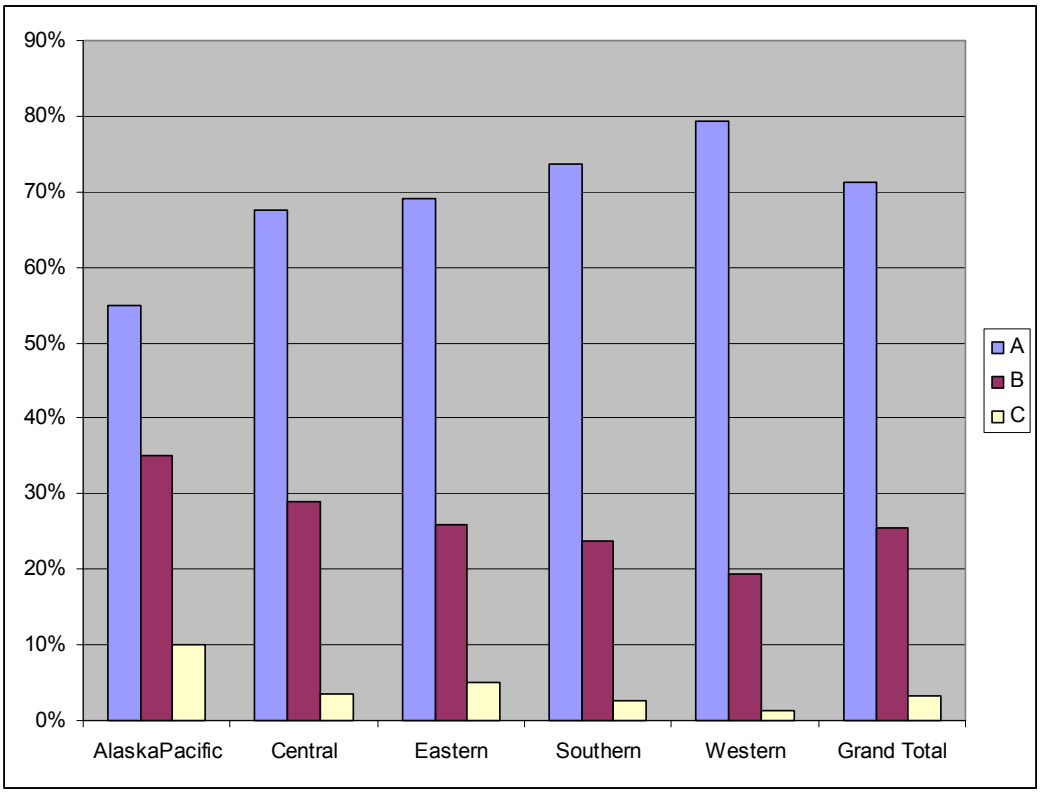
A. 75 - None
B. 204 - < 10 percent
C. 242 - 10-25
D. 68 - 25 - 50
E. 26 - more than 50
F. 169 - No Service Hydrologist

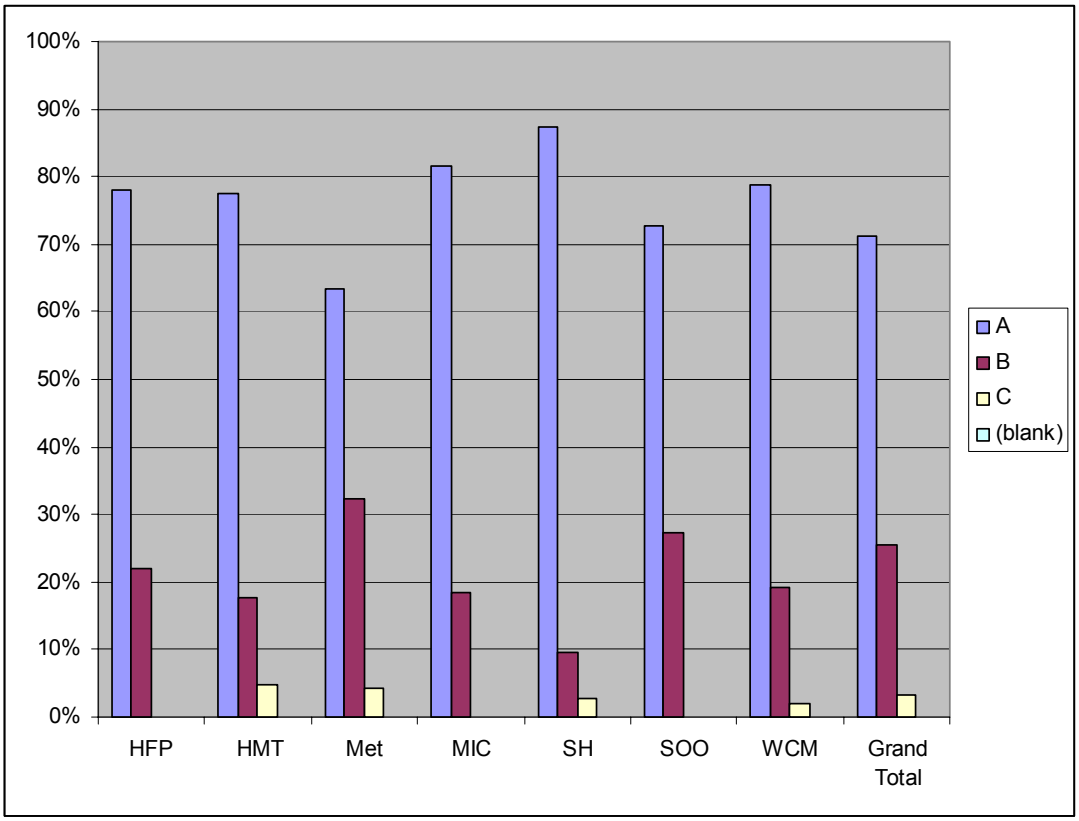




Question 10: How important is a local NWS contact in the delivery of products and services

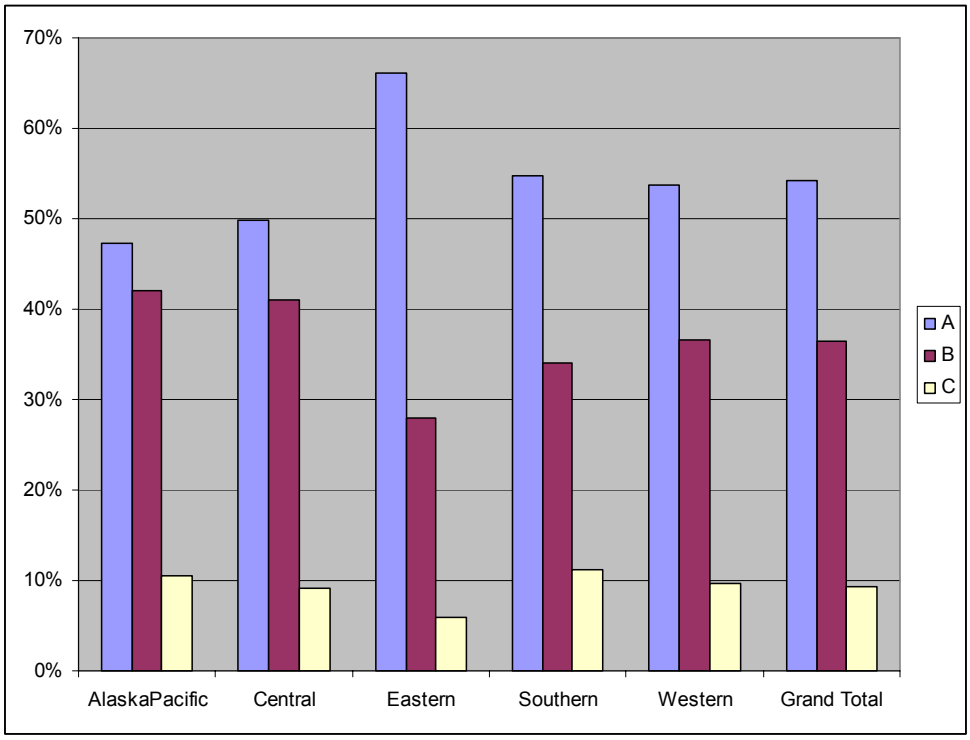
A. 553 - Extremely Important
B. 197 - Somewhat Important
C. 25 - Not important

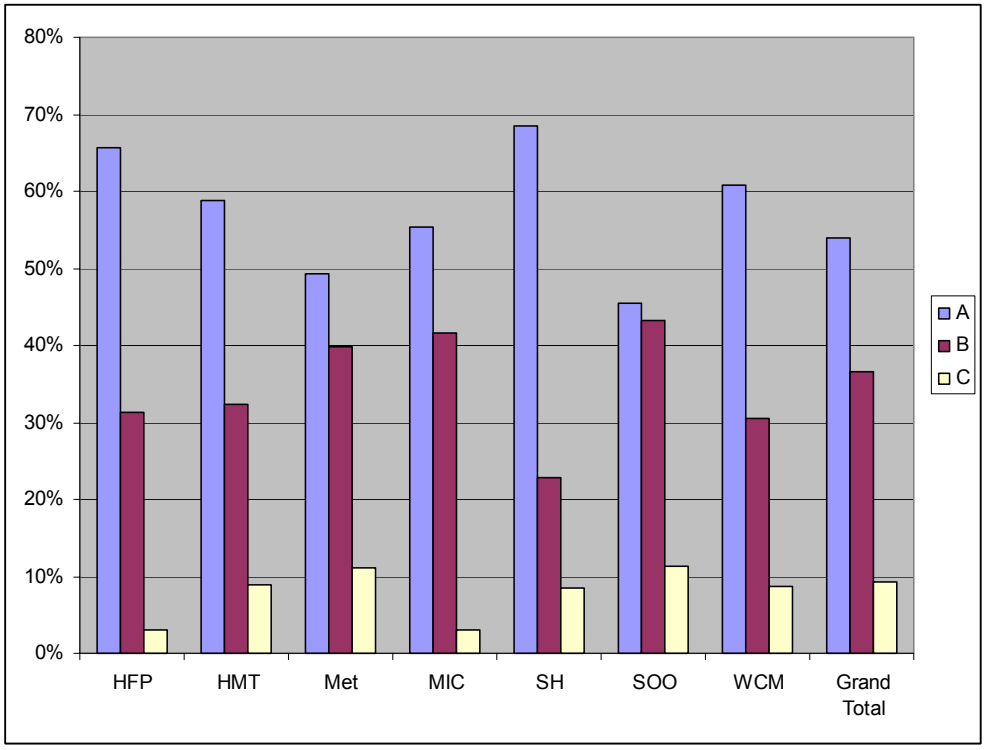




Question 11: How important is a single NWS point of contact for our customers

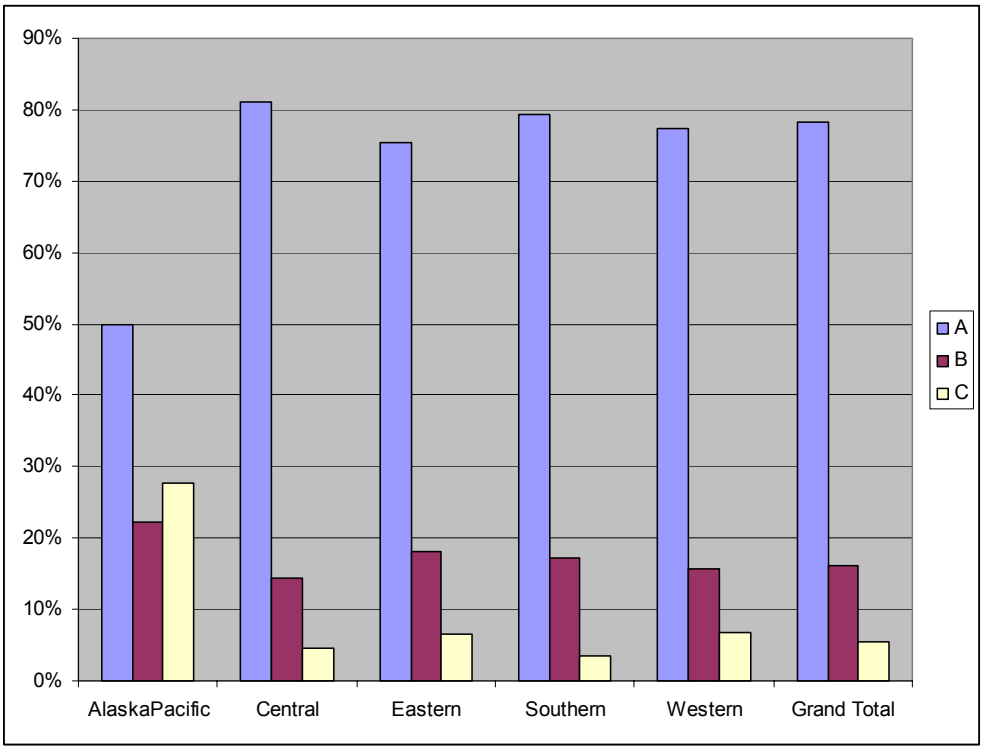
A. 417 - Extremely Important
B. 278 - Somewhat Important
C. 71 - Not important

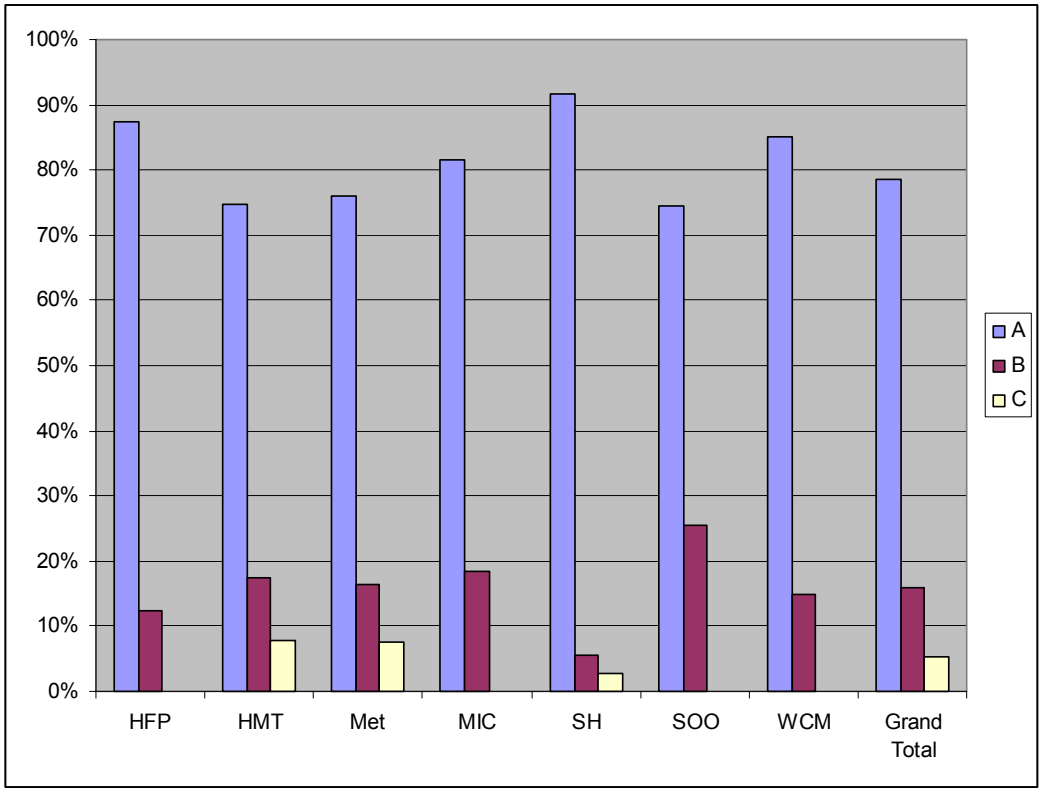




Question 12: What is the impact of having the WFO issue the public hydrologic products

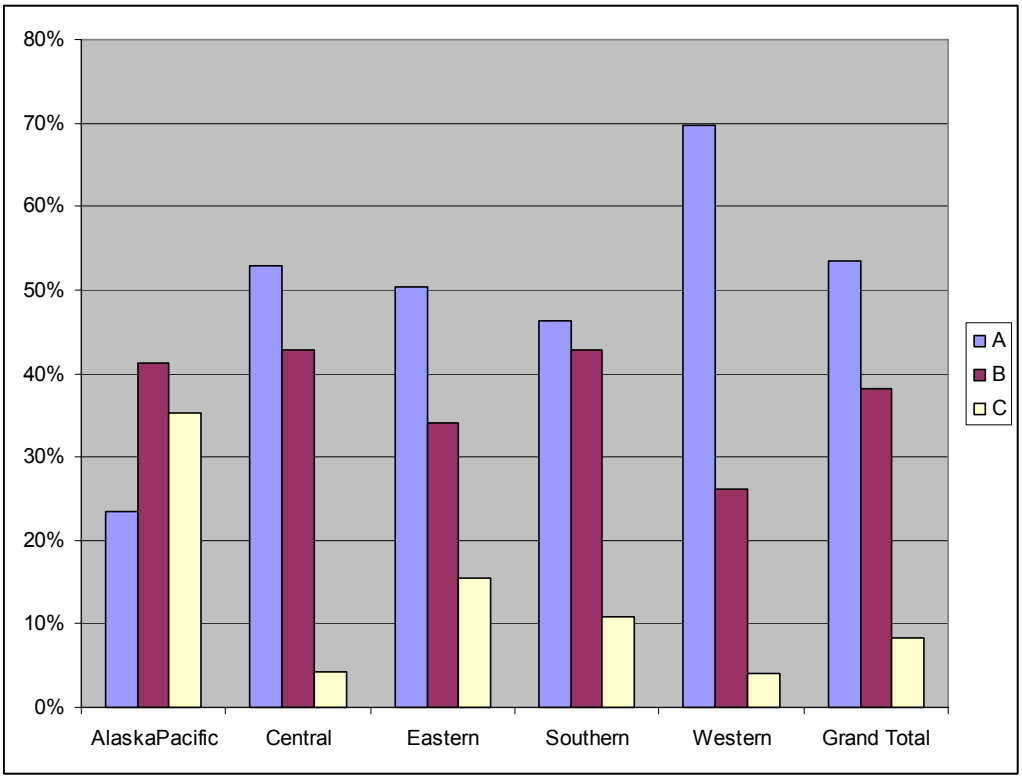
A. 609 - Improved
B. 125 - Neutral
C. 43 - Degraded

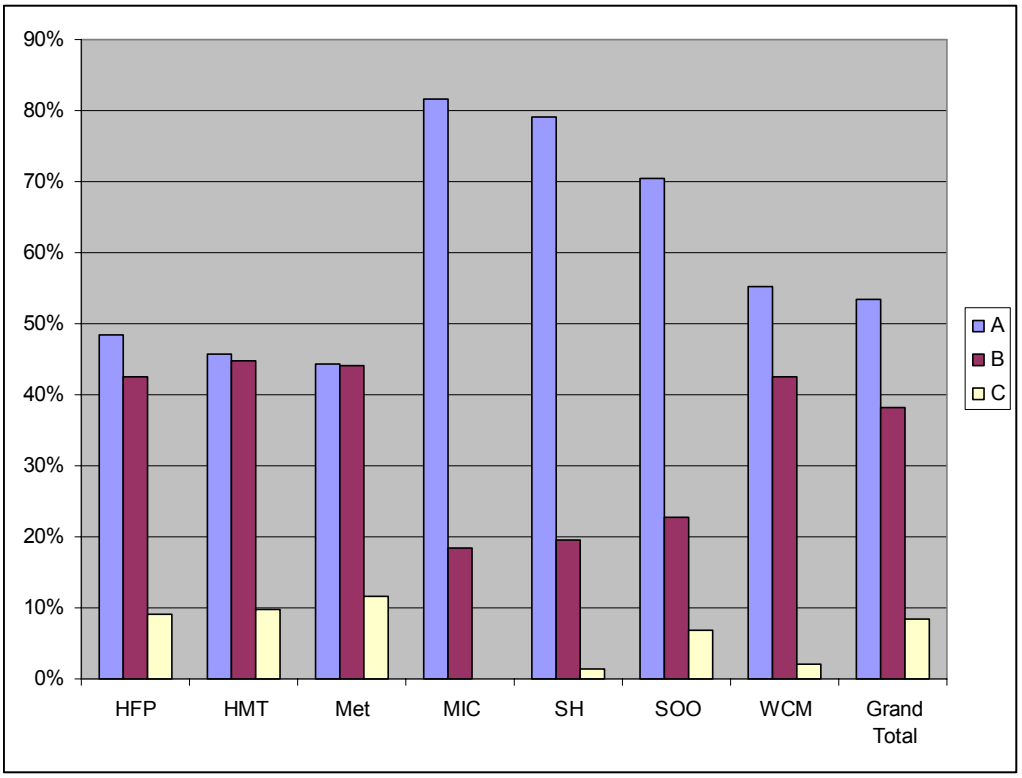




Question 13: How is hydrologic service outreach approached in your office?

A. 410 - Enthusiastically
B. 293 - Limited
C. 65 - Unusual

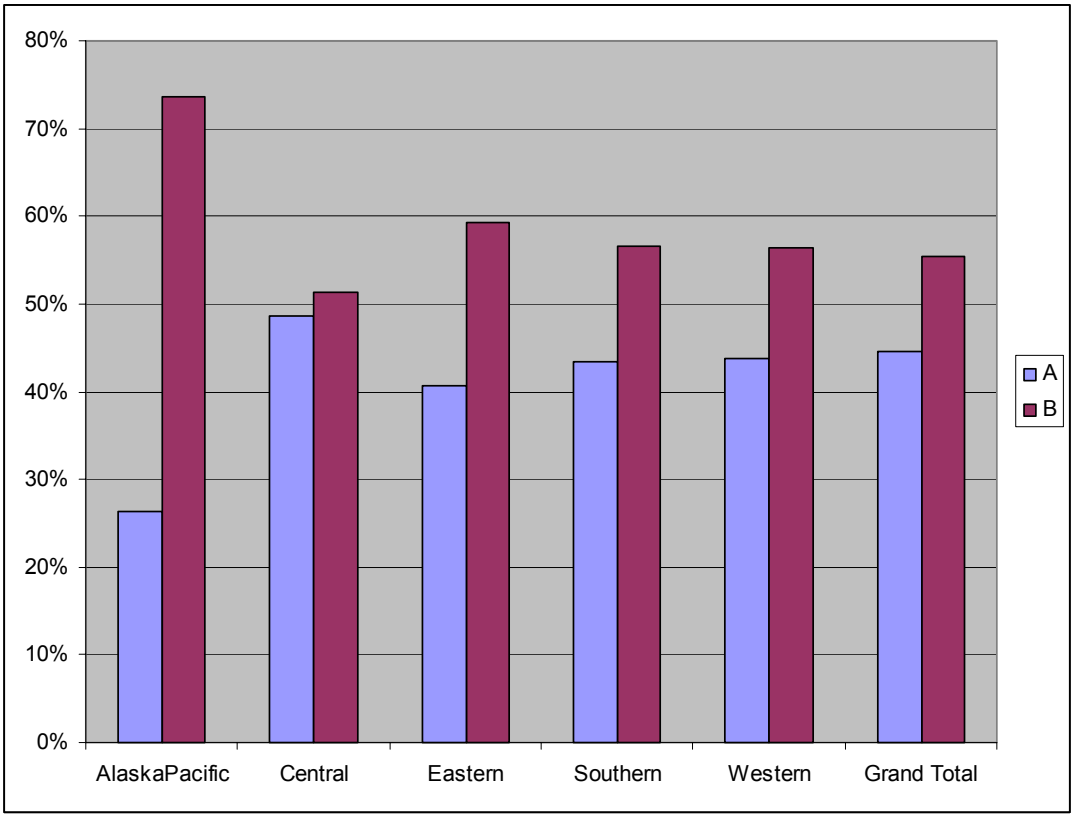


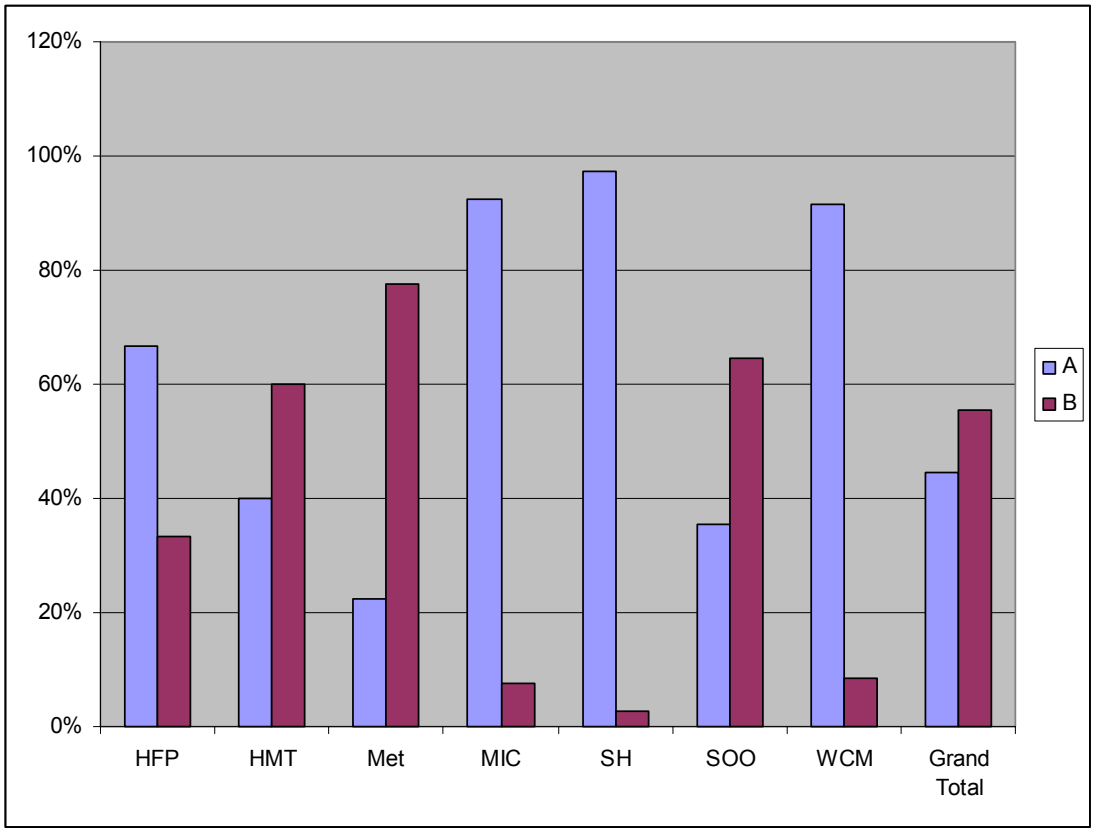


Question 14: Were you directly involved in hydrologic outreach during the past 12 months?

A. 350 - Yes

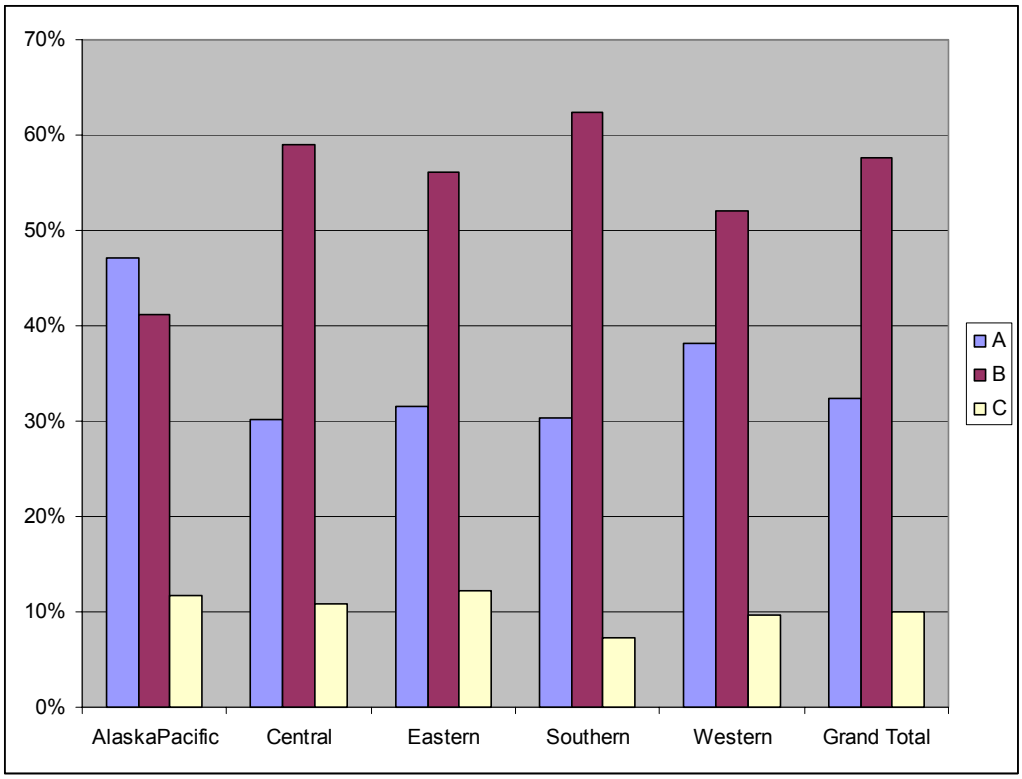
B. 437 - No

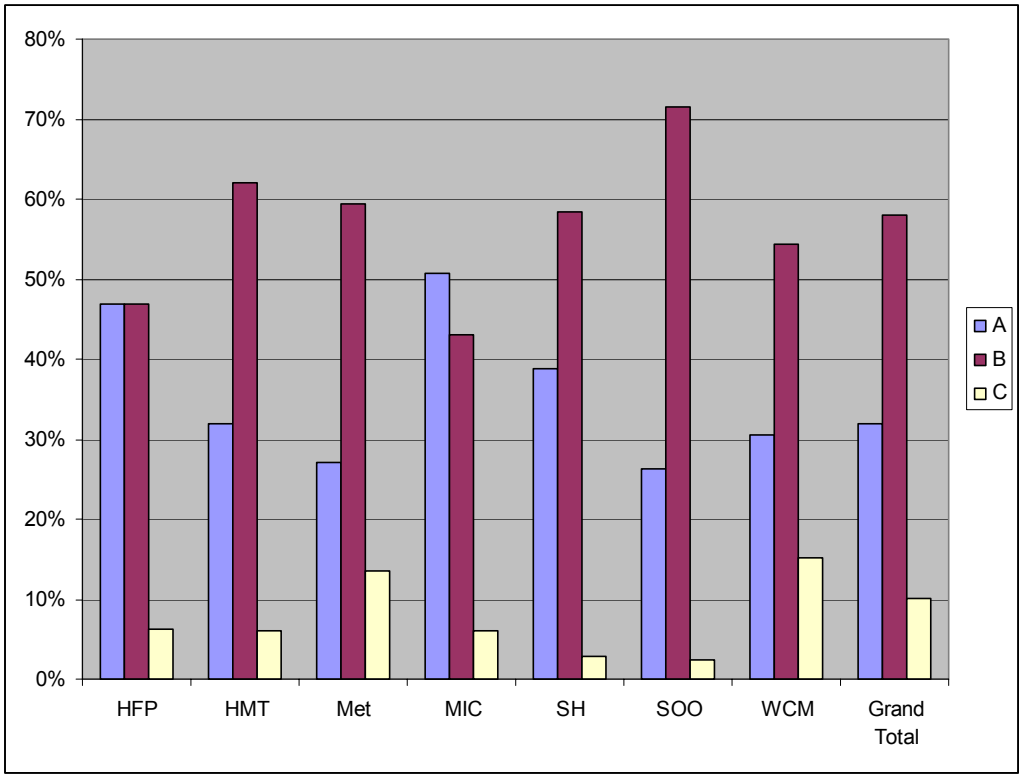




Question 15: Does the RFC understand the needs of your hydrologic customers?

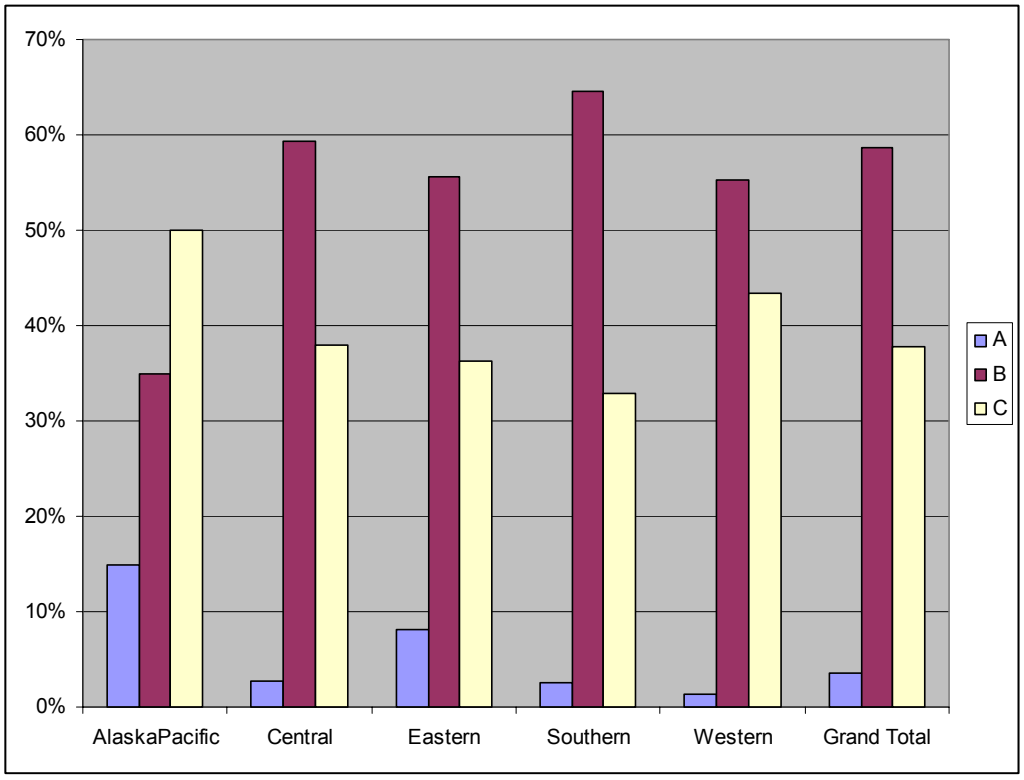
A. 245 - Yes
B. 435 - Somewhat
C. 75 - No

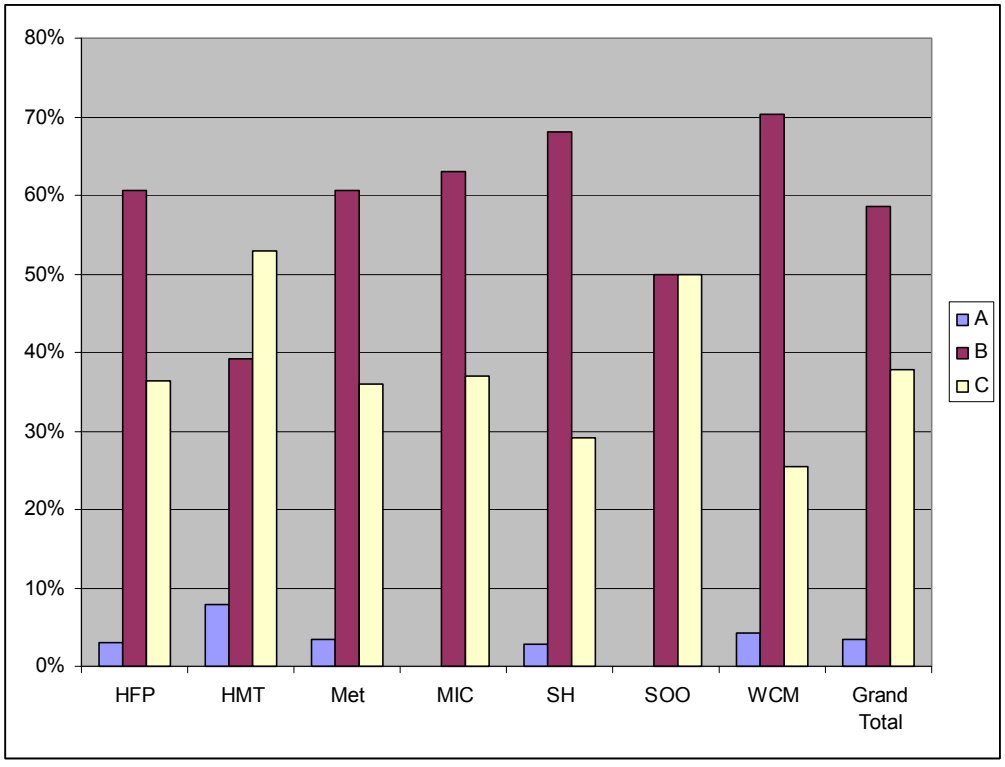




Question 16: What field office should be responsible for the flash flood program

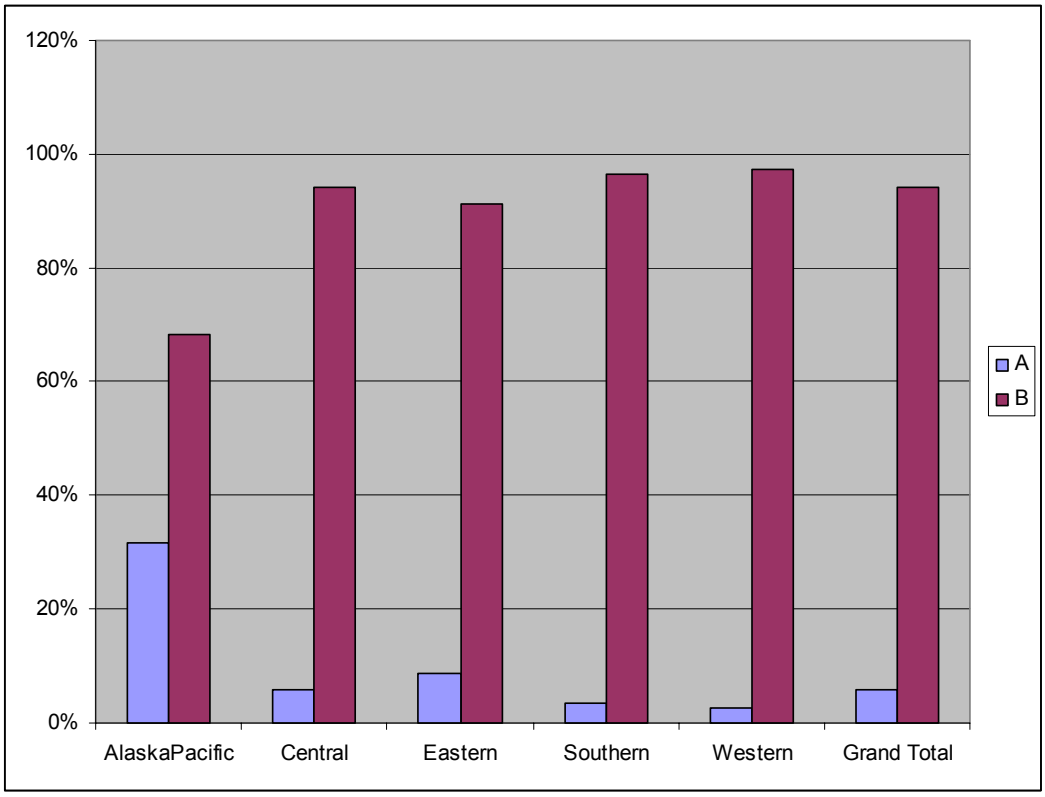
A. 28 - RFC
B. 459 - WFO
D. 296 - Both RFC and WFO

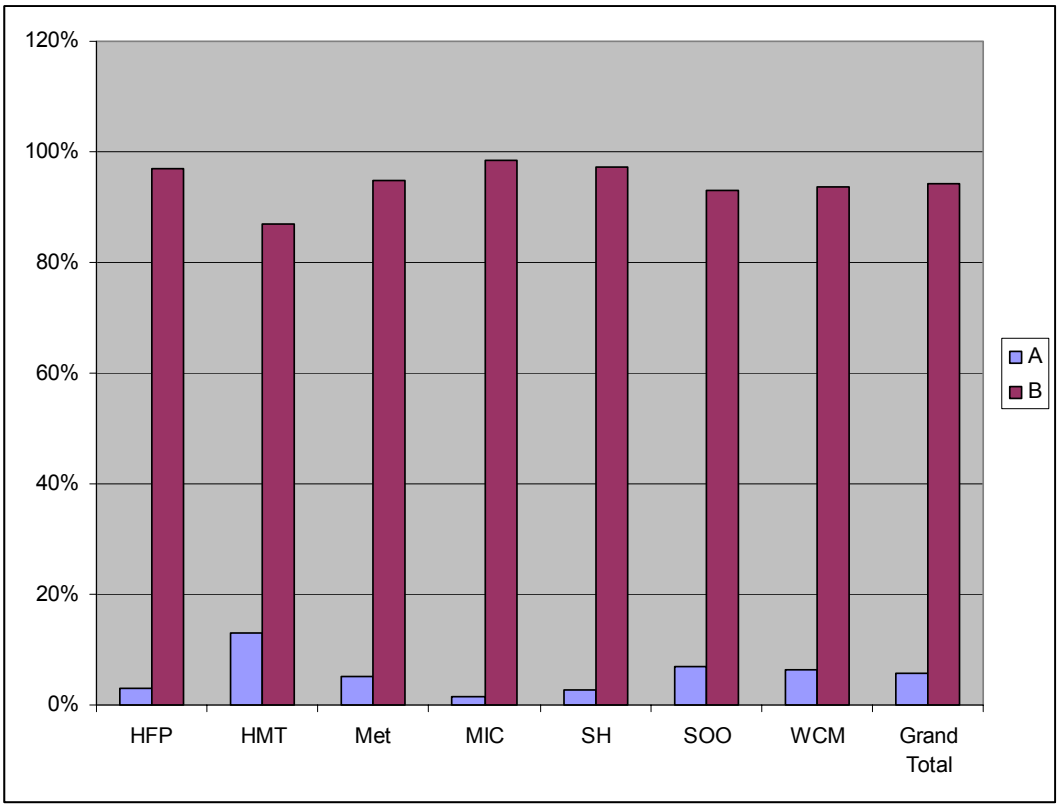




Question 17: What field office should issue public flash flood watches and warnings?

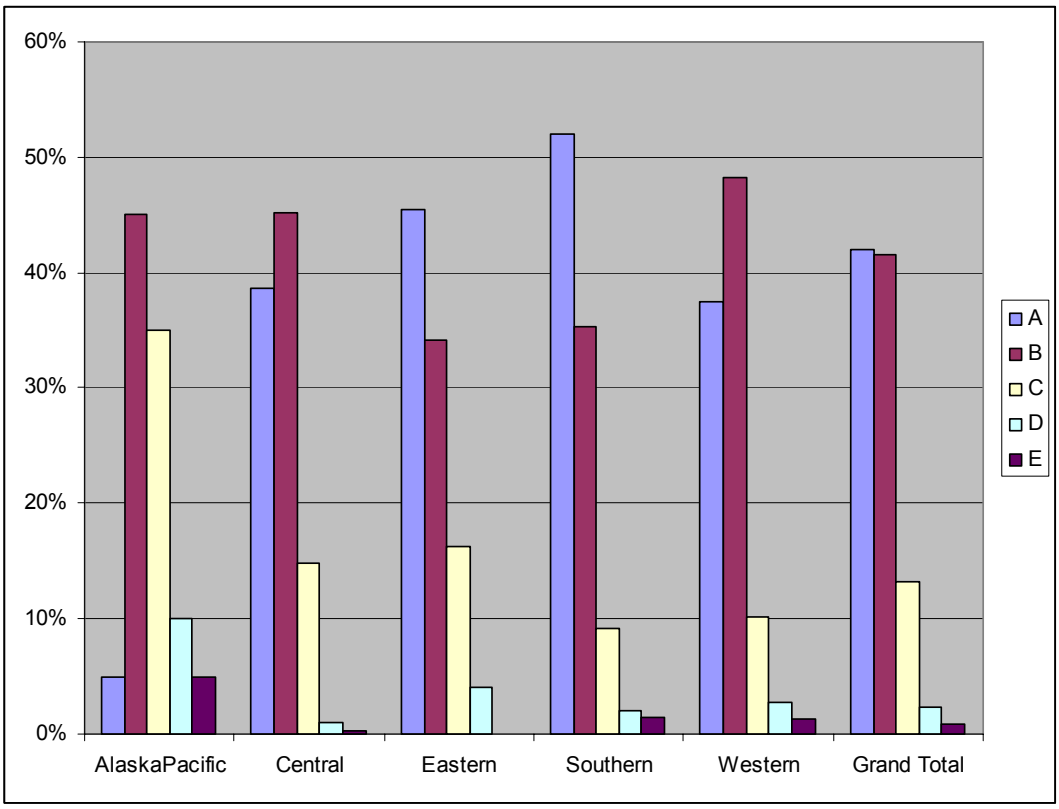
A. 45 - RFC
B. 734 - WFO

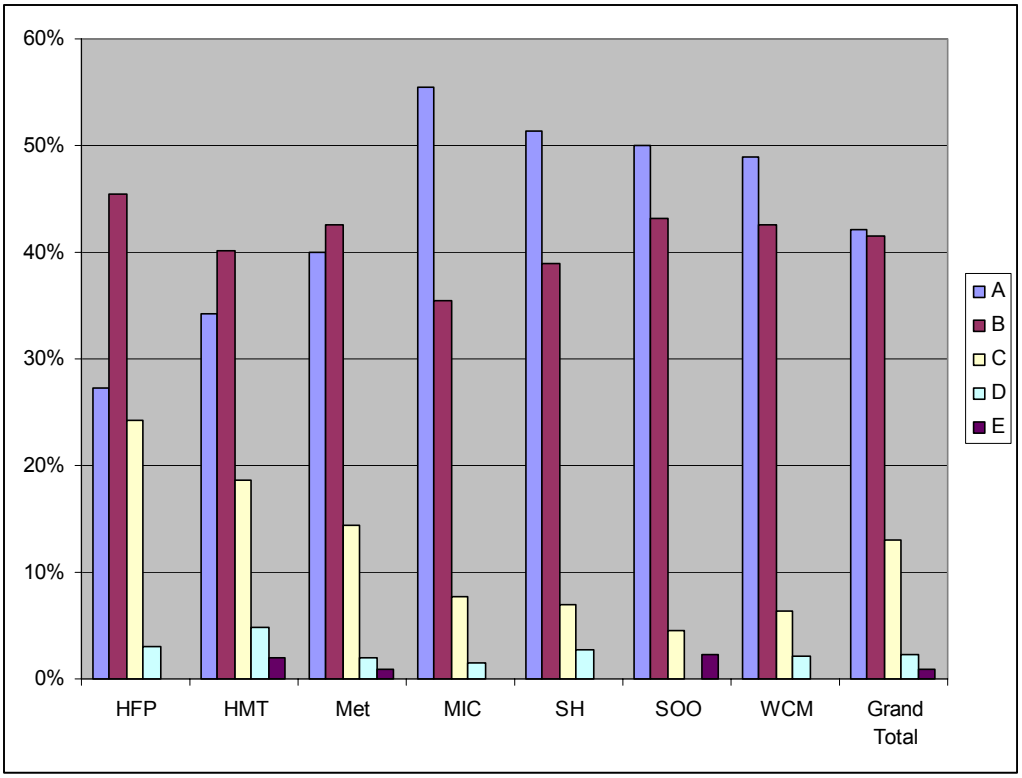




Question 18: Please rate your offices support for the flash flood program

A. 328 - Excellent
B. 324 - Good
C. 103 - Adequate
D. 18 - Poor
E. 7 - Unnecessary





Question 19: How can your office improve support for the flash flood program?
402 text responses

Training Issues

- **More training in a variety of forms is needed (34)**
  - **VISIT teletraining**
  - **WES cases**
  - **Drills**
  - **need SOO involvement**
  - **NOTE: concern about time issues**
- **Local studies need to be performed to assess: (22)**
  - **Climatology**
  - **flood prone areas**
  - **GIS tools**
- **Provide additional training to existing spotter network and actively seek reports (16)**
- **Field visits by staff (3)**

Science and Technology

- **Implementation of AMBER, FFMP, and Site Specific (28)**
- **Need maps/atlases/GIS type info readily available (7)**
- **Set up audible alarms of potential troublespots**
- **Local mesoscale and hydro models linked (4)**
- **tools to help visualize terrain (2)**
- **More workstations required to monitor severe and heavy precip**

Operations Issues

- **Rain gage network needs to be expanded (25)**
- **Rain gage network, particularly IFLOWS, needs to be better maintained (6)**
- **Better outreach and coordination to local officials and media (24)**
- **Need to pay attention to heavy precip and give it the same priority as severe (15)**
- **Need a service hydrologist (6)**
- **Don't wait for reports of flooding before issuing products (2)**

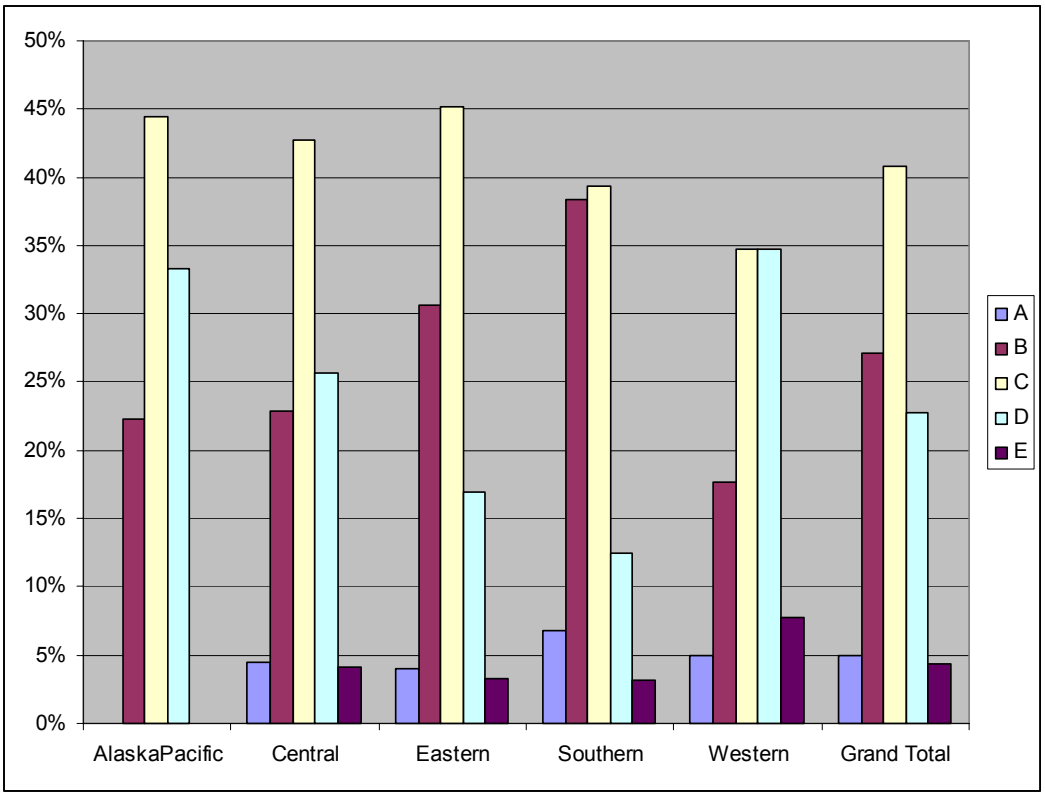
Other comments

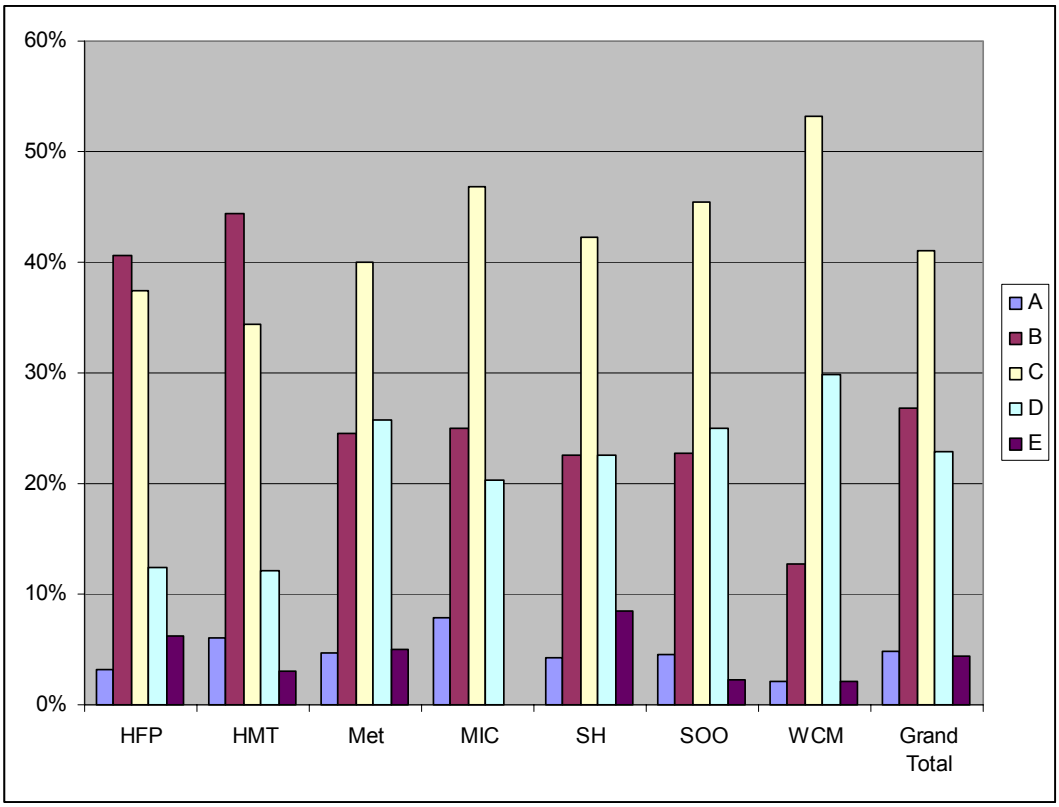
- **need guidance on urban flooding vs FFW**
- **exchange visits with RFC**
- **Do we need an RFC in Central Region?**
- **Having another office issue watch might heighten awareness**
- **No RFC in Hawaii**
- **need clear concise E22**
- **support cloud seeding**
- **combined Severe Thunderstorm and Flash Flood Warning**
- **allow deviation from RFC guidance**
- **need an 88D in northeast Wyoming**
- **get rid of urban advisories**

The entire Hydro program has become so complex in the past few years that we, the NWS employees, can't explain it to ourselves let alone our customers. Simplify, Simplify, Simplify

Question 20: Please rate the RFC support of the flash flood program...

A. 38 - Excellent
B. 207 - Good
C. 312 - Adequate
D. 174 - Poor
E. 34 - Unnecessary





Question 21: How can the RFC improve support for the flash flood program?
444 text responses

Status Quo?

- **No changes necessary (24)**
- **What support (10)**

Staffing

- **better 24 hour availability for flash flood support (25)**
- **RFCs take full responsibility (4)**
- **RFC should not take full responsibility (8)**
- **Service Hydrologist at every WFO (3)**
- **move FTEs out of RFC (2)**
- **move SH to RFC and have RFC 24 hour (1)**

Products and Services

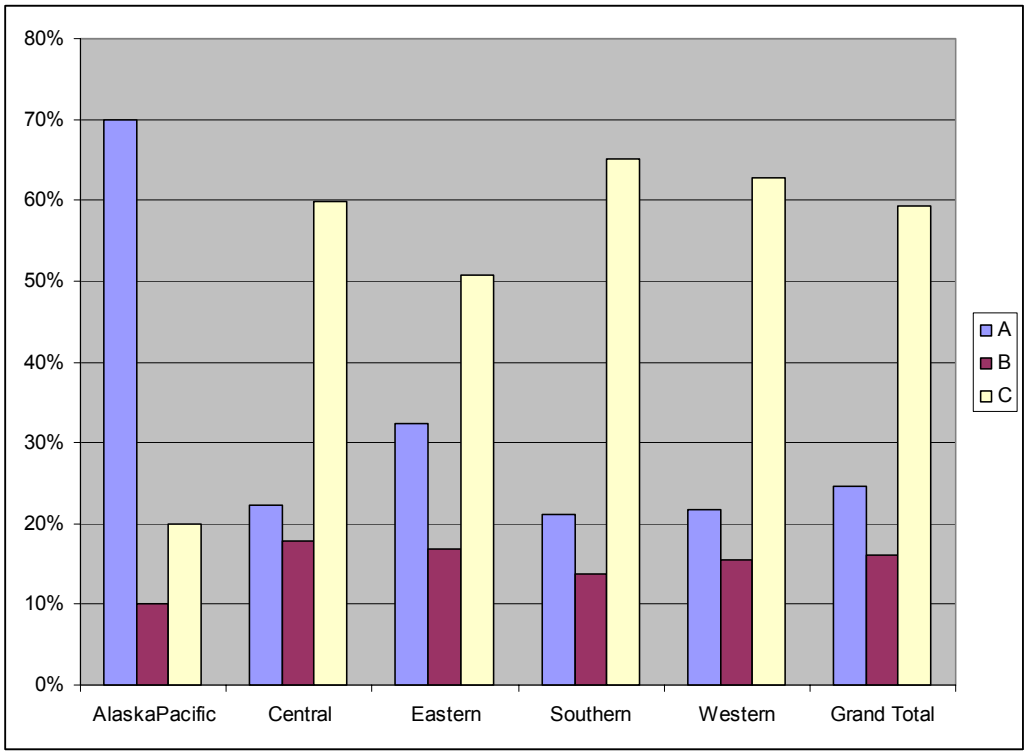
- **improve FFG (143)**
  - **issue FFG 2 or more times per day(25)**
  - **provide FFG where not currently available (17)**
  - **coordinate FFG across RFC boundaries (24)**
  - **consistency on zone or county guidance (5)**
  - **gridded FFG (5)**
  - **verify FFG (7)**
- **training on FFG (3)**
- **better definition of Flash Flood (3)**
- **Update QPF/QPE more frequently (5)**
- **improve quality of QPF/QPE (11)**
- **provide automated StageIII when RFC closed (2)**
- **Provide Precip data to support AMBER (2)**
- **Develop models with short time steps and add more forecast points(17)**
- **provide site specific model to wfo (15)**
- **RFC should issue flood watches like SPC (2) - NOT issue flood watch (7)**
- **provide training to WFOs on identify flood prone areas, ice jam, outreach (8)**

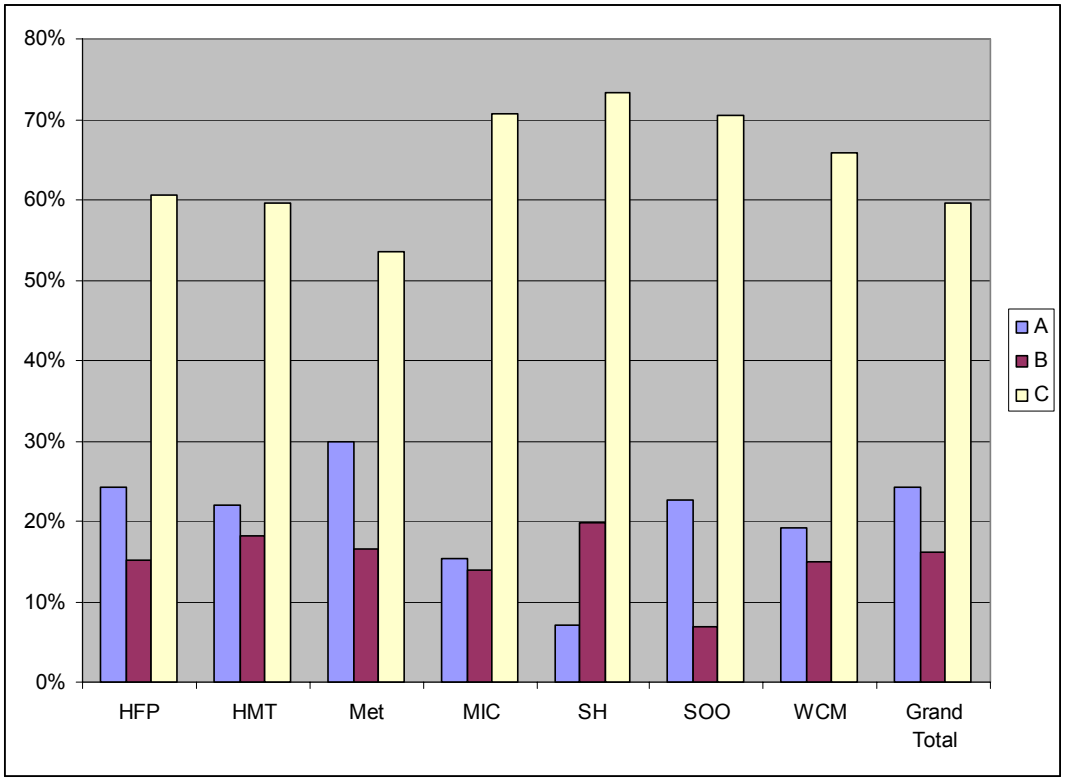
RFC Behaviors

- **monitor events better and corrdinate with WFO (60)**
- **RFC needs better basin understanding (18)**
- **understand needs of WFO (8)**
- **provide info to WFOs more quickly (9)**
- **RFCs need to demonstrate concern for flash flooding (10)**
- **Flash flood focal point to work with WFOs (2)**

Question 22: What field office should be accountable for the river flood program?

A. 194 - RFC
B. 125 - WFO
F. 462 - Both RFC and WFO

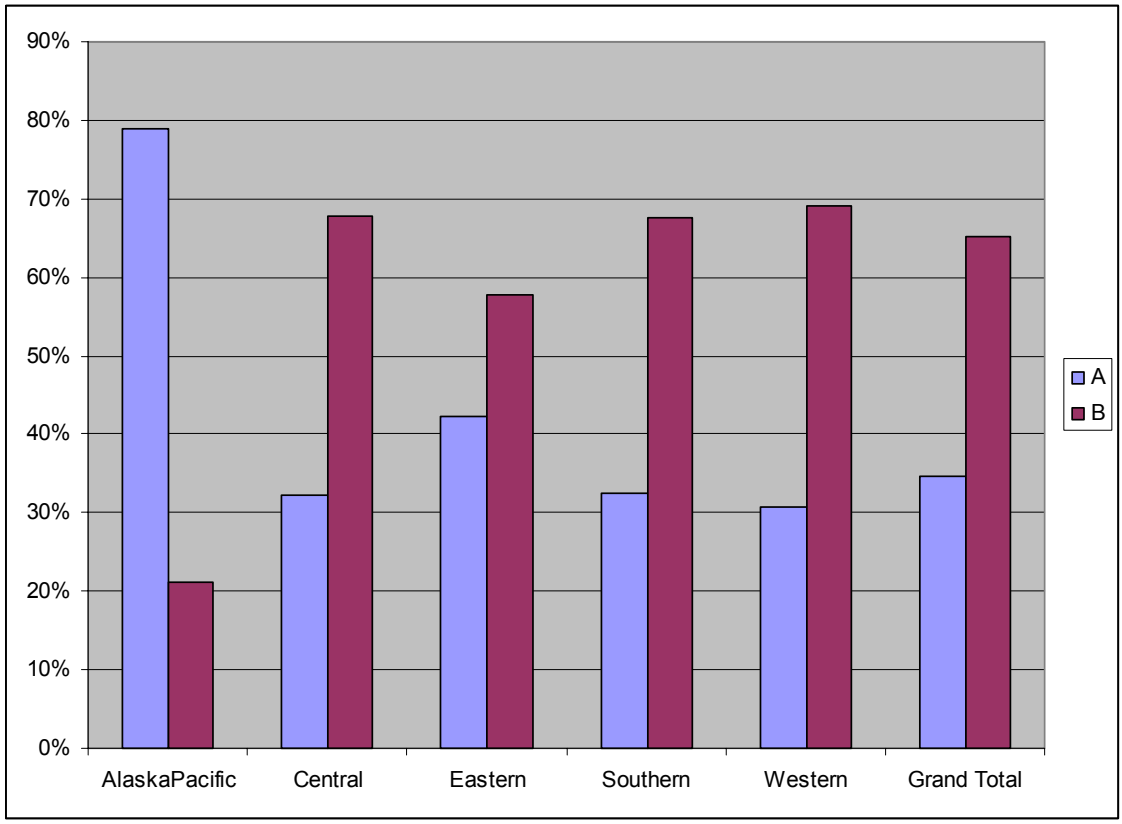


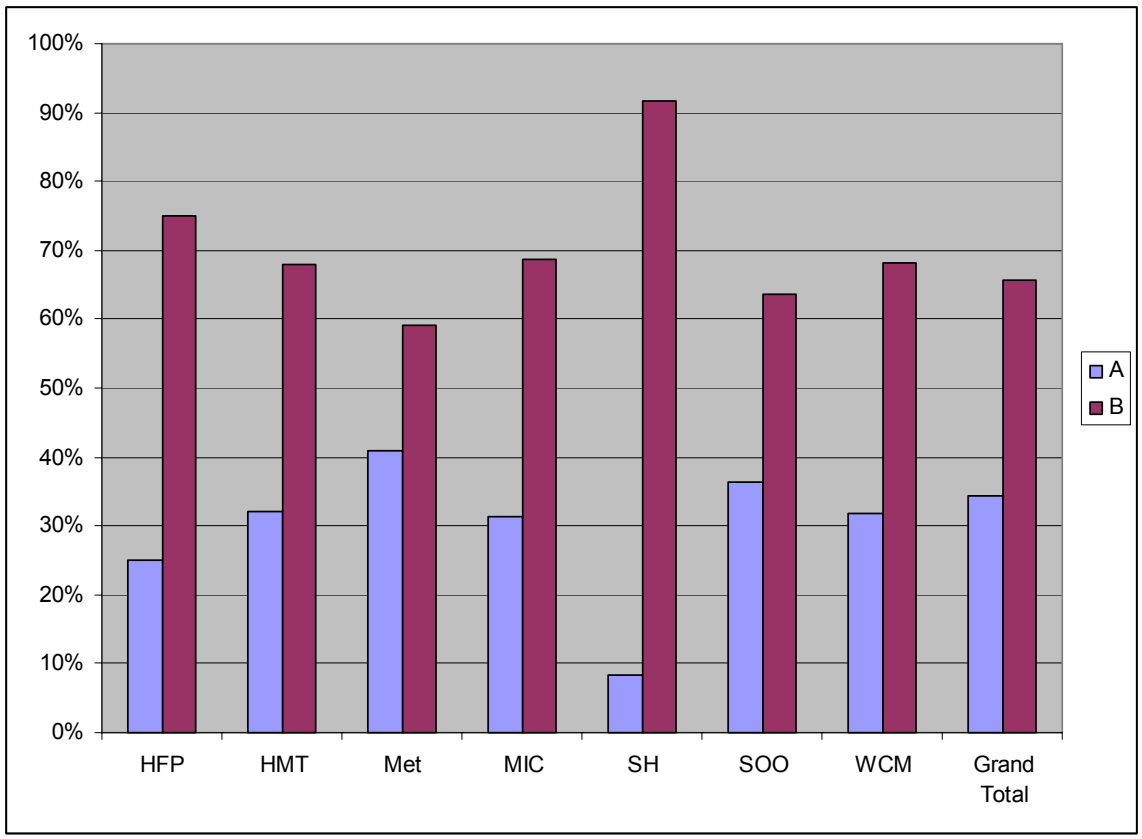


Question 23: What field office should issue public river flood watches and warnings?

A. 270 – RFC

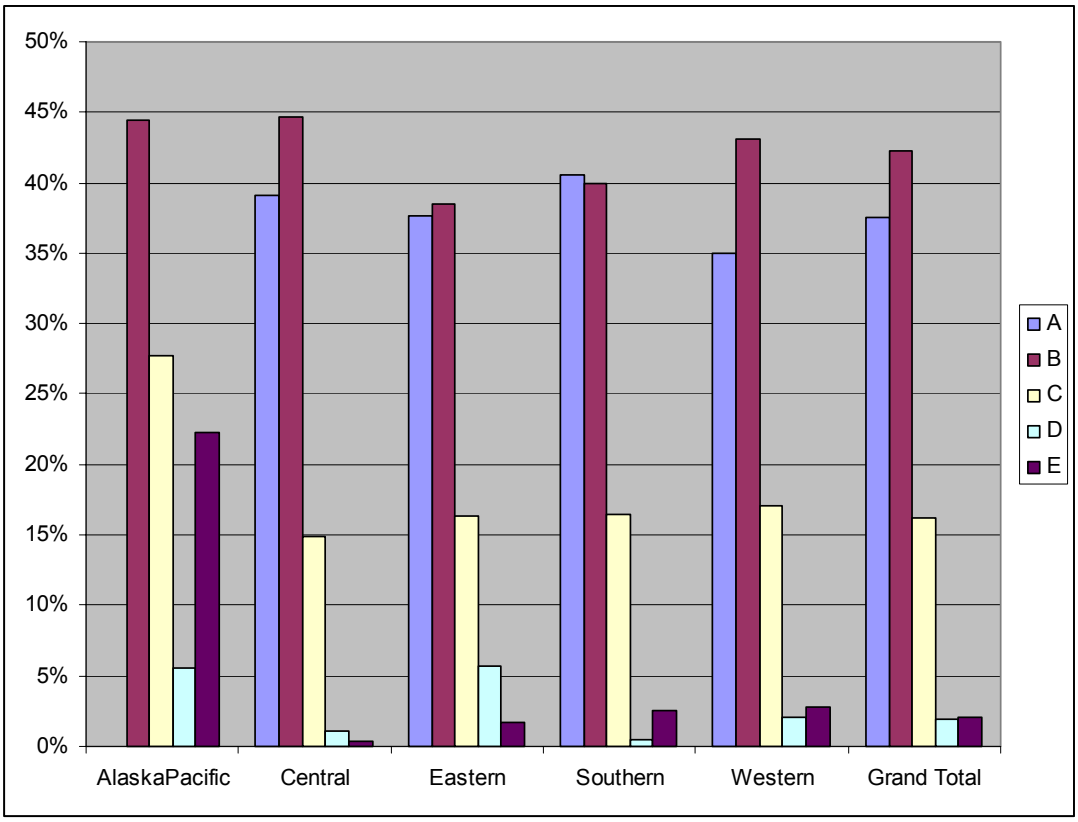
B. 506 – WFO

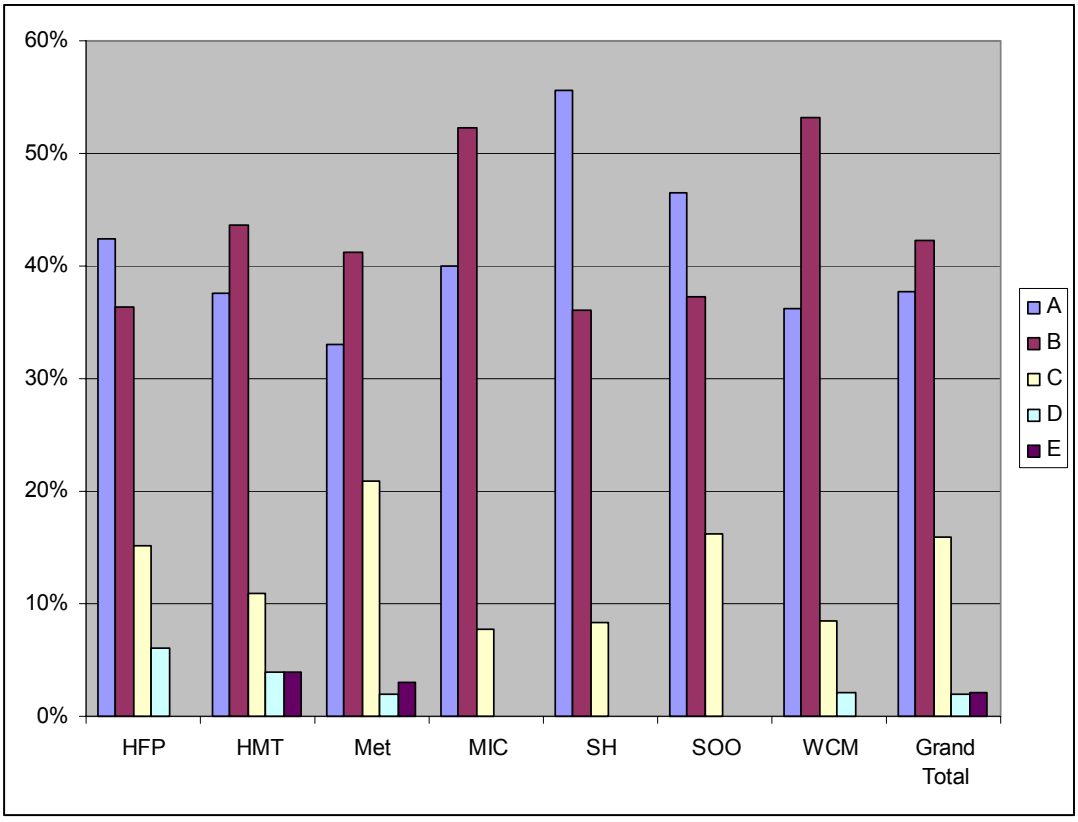




Question 24: Please rate your office support of the river flood program

A. 290 - Excellent
B. 326 - Good
C. 125 – Adequate
D. 15 – Poor
E. 16 – Unnecessary



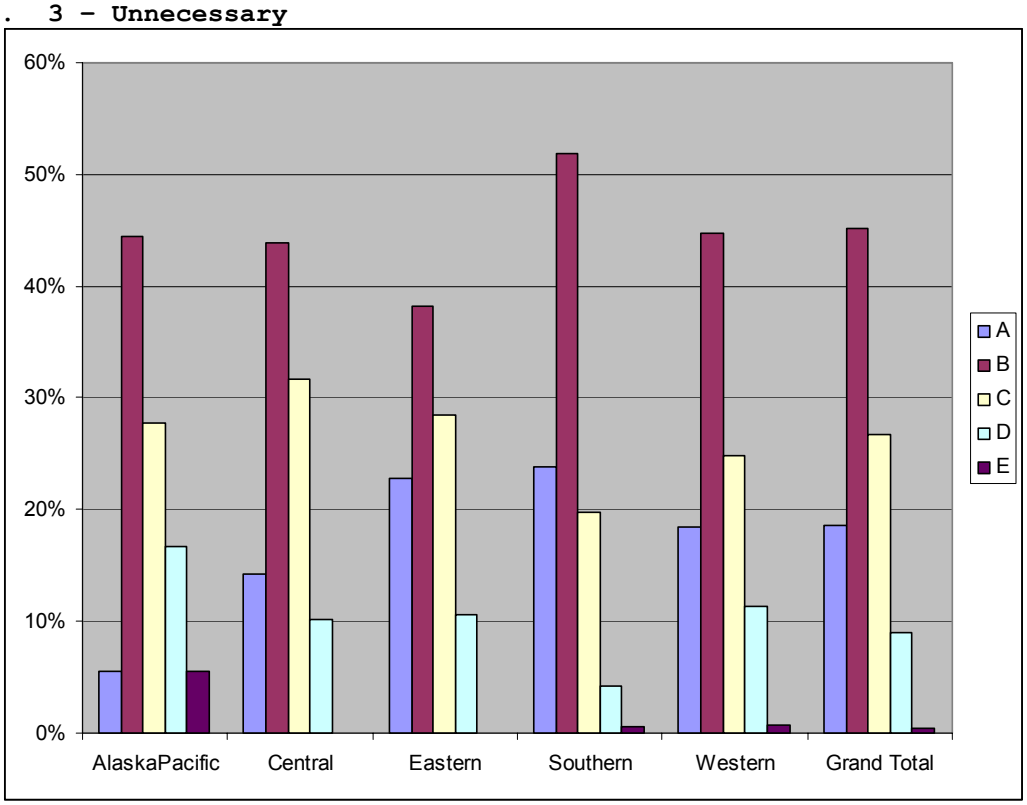


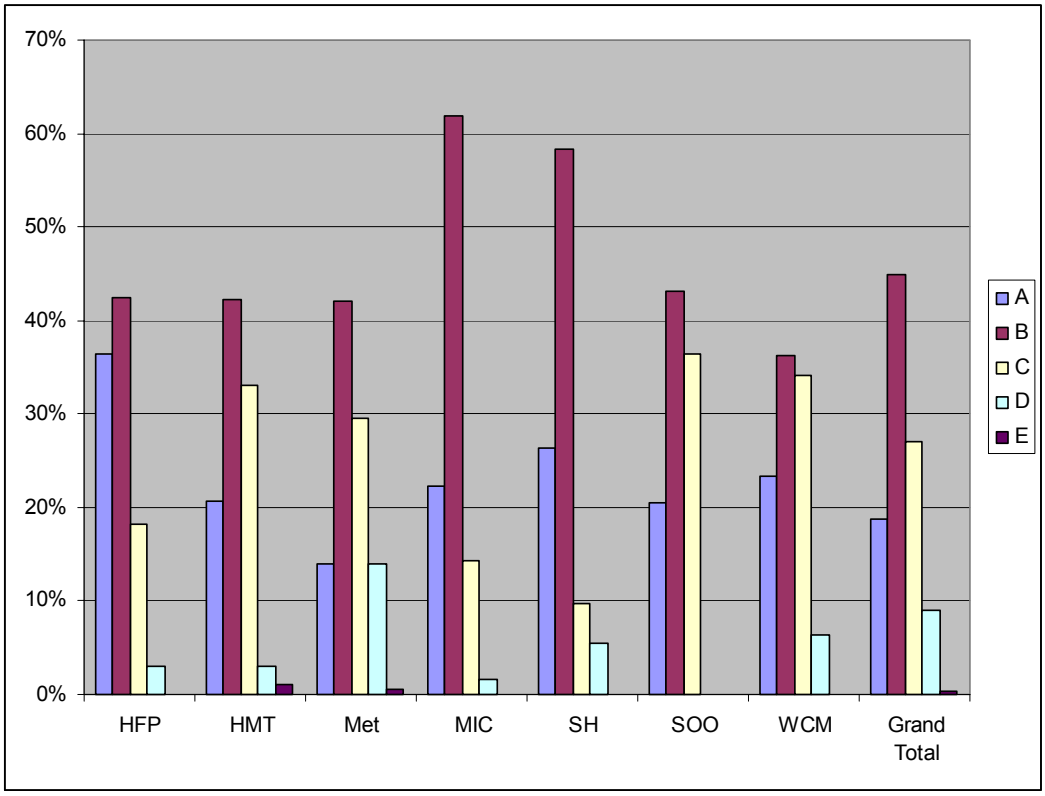
Question 25: How can your office improve support for the river flood program?
355 text responses

- **improve training for forecasters and HMTs (48)**
- **increase number of gaging sites and forecast points (35)**
- **improve communications between RFC and WFO in particular more visits between the two offices (31)**
- **increase outreach with customers and partners (28)**
- **need a full time service hydrologist, not focal point (25)**
  - **Sr Service Hydrologist role not functioning as it should. They are not providing needed support to focal point and in some cases they had never been visited by the SH (3)**
  - **Need more time for SH / HFP functions**
- **More support (time and funds) for field work (20)**
- **All river functions should be at RFCs (12)**
- **Give WFO more latitude in revising forecasts (5)**
  - **Give WFO the models**
- **Implement Site specific (14)**

Question 26: Please rate the RFC support of the river flood program

A. 144 - Excellent
B. 344 – Good
C. 204 – Adequate
D. 69 – Poor
E. 3 – Unnecessary





Question 27: How can the RFC improve support for the river flood program
383 text responses

Products

- **products need to be quality controlled a lot better. Frequent complaints about forecasts being in error before they are even issued (22)**
- **product verification needs to take place (9)**
- **more frequent updates particularly during flooding (9) especially need a quicker turn around time from data receipt to product (4)**
- **provide hydro forecast discussion product (2)**
- **provide forecasts with and without QPF (9)**
- **be willing to deviate from model guidance (7)**
- **RFC needs to be proactive and not wait for request for forecast (12)**
- **more forecast locations (5)**
- **ability to make several scenario or contingency runs as the event is in progress (4)**
- **provide daily forecast for all locations (9)**
- **graphical QPF and stage products (3)**
- **RVF should be guidance not gospel (5)**

Coordination

- **better real time coordination with WFO to discuss conditons (22)**
- **more outreach to WFO for training and listening (16)**
  - **increase knowledge of HSA basins (14)**
- **field trips, possibly including WFO staff (7)**
- **more willingness to rerun (7)**
- **listen to the WFO and be responsiveness (15) and don't give them an attitude (2)**
- **better monitoring of weather conditons (5)**
- **better communication skills (5)**
- **awareness of situational impacts (5) including media times (2)**
- **be willing to answer phones and talk to public (4)**
- **identify self when answering phones**
- **WCM position**

Science

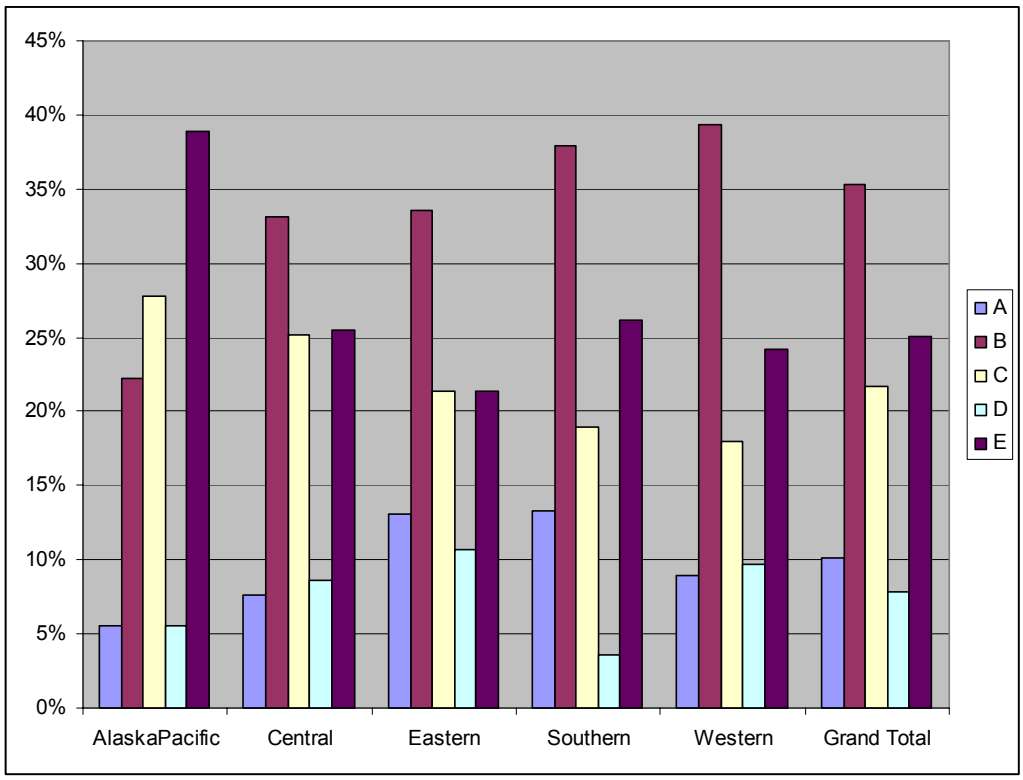
- **continue working on science improvements and calibration (14)**
  - **improve snow model (2)**
  - **develop ice jam model**
- **implement AHPS probabilistic forecasts (7)**
- **6 hour time step is a problem**
- **use more QPF in models (4)**

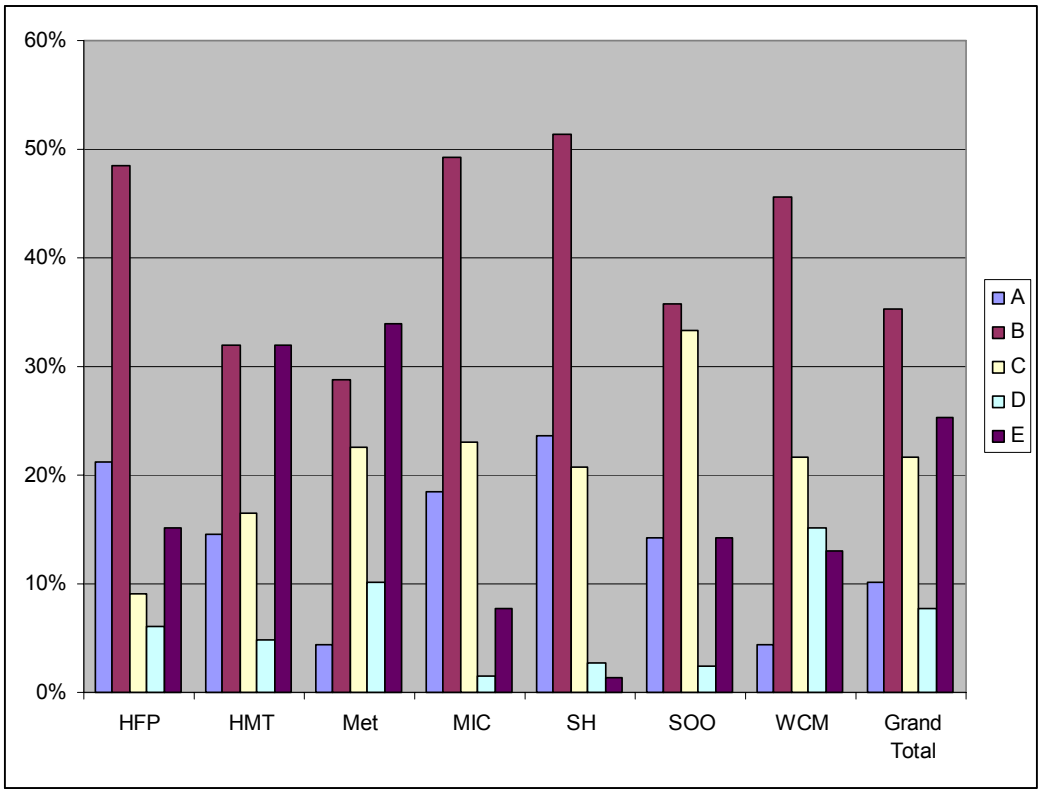
Other

- **RFC do not have to deal with the public complaints about their forecasts (8) and they do not care**
- **24 hour staffing (11); increased staffing during flooding or potential flooding (4)**
- **Keep up the good work (12)**
- **Take over entire program (12)**
- **Give entire program to WFOs (3)**

Question 28: Please rate the responsiveness of the RFC to WFO requests for new or expanded services

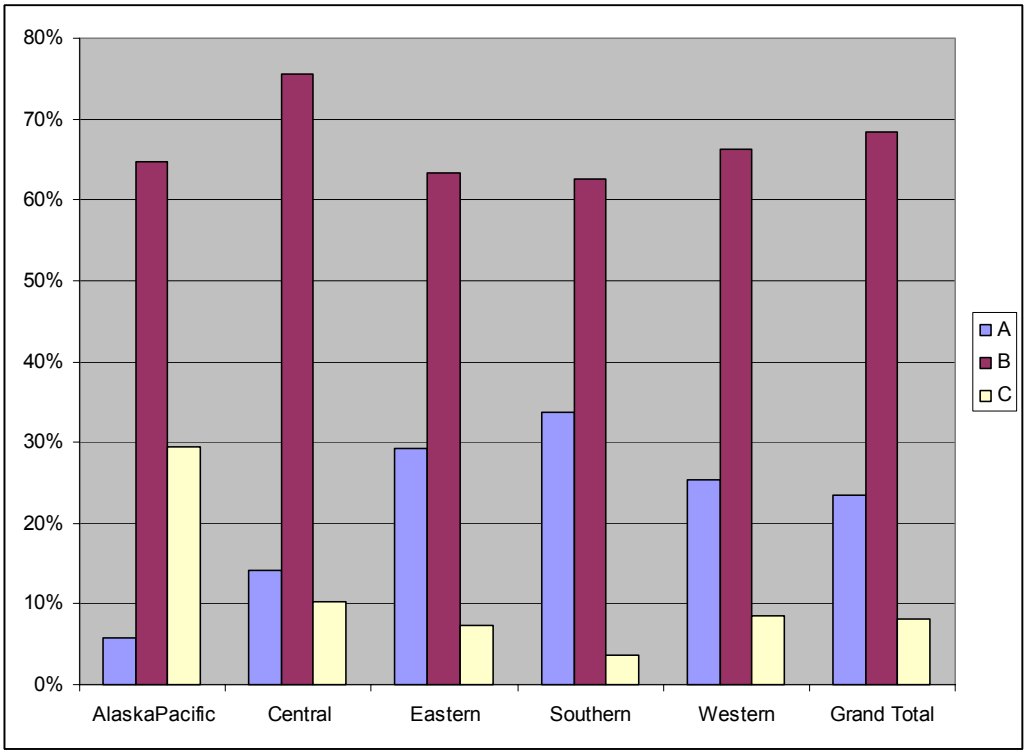
A. 78 - Excellent
B. 272 - Good
C. 168 - Fair
D. 60 - Poor
G. 193 - Unknown

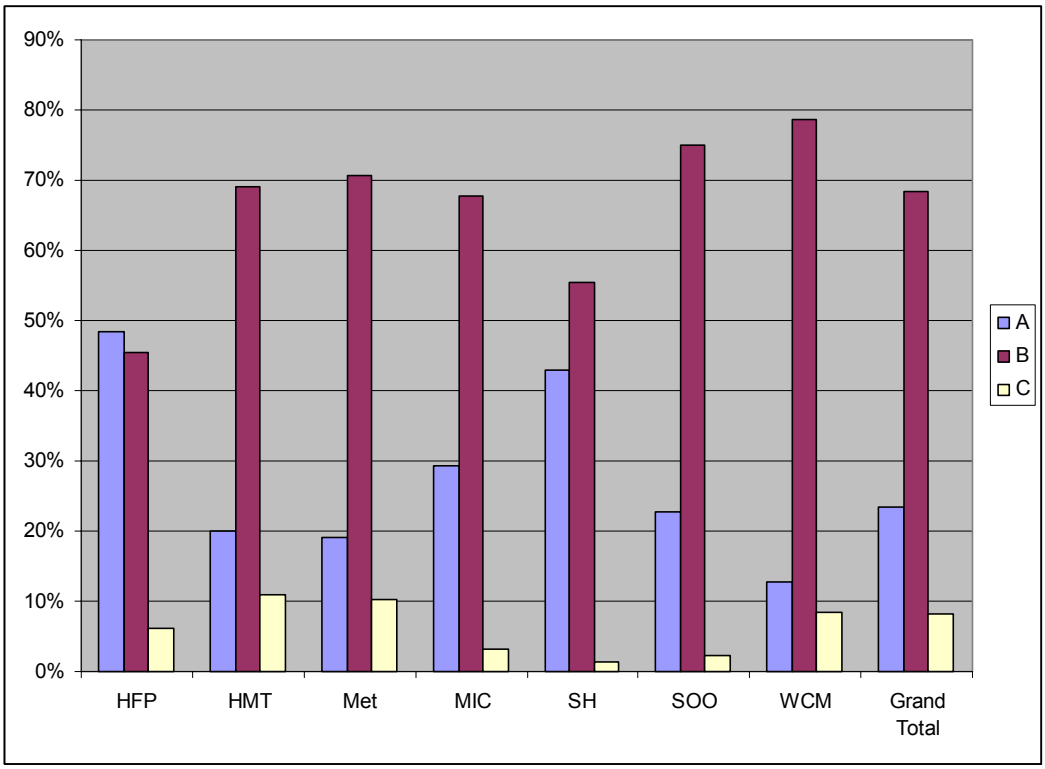




Question 29: Is the RFC available to provide operational support when required?

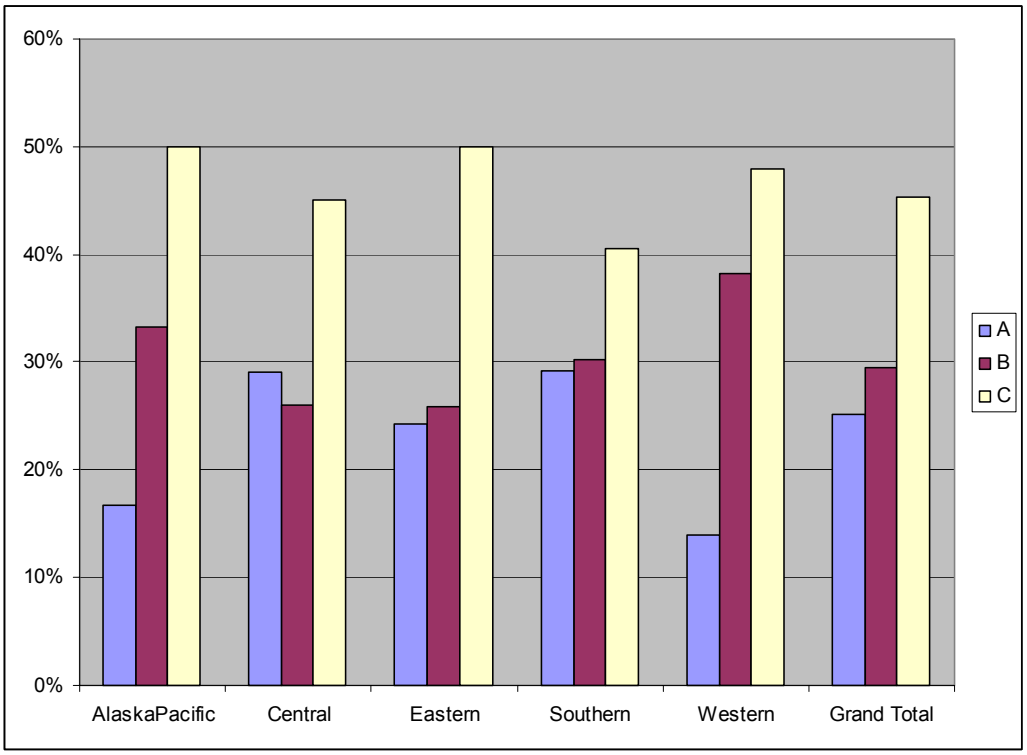
A. 177 - Always
B. 518 - Most of the time
C. 62 - Frequently unavailable

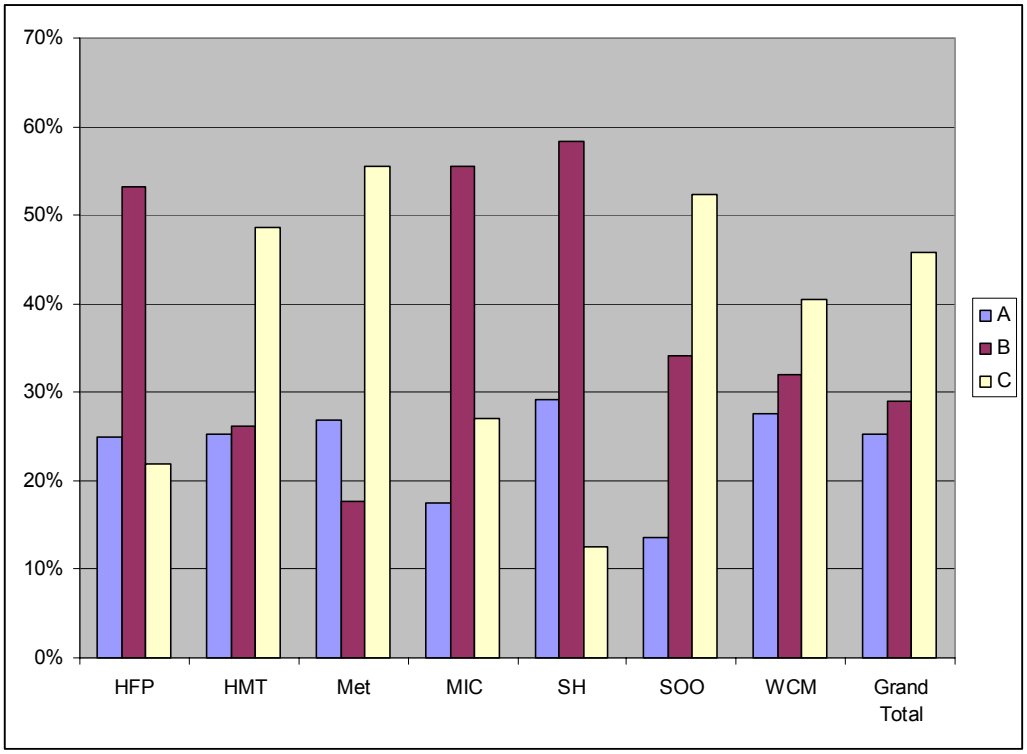




Question 30: Have hydrologic database inconsistencies resulted in coordination or service problems?

A. 195 - Yes
B. 229 - No
C. 352 - Don't know
143 text responses





Response

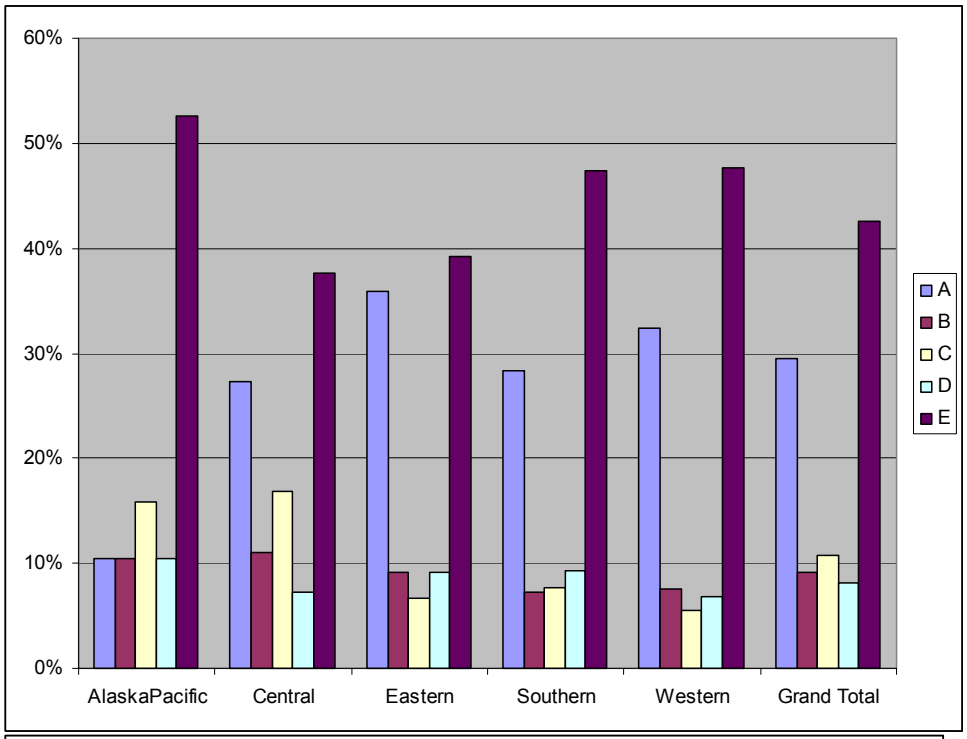
- **None noted (20)**
- **Process is in place to address inconsistencies (4)**
- **small problems have been resolved (3)**
- **SH has team to maintain (2)**

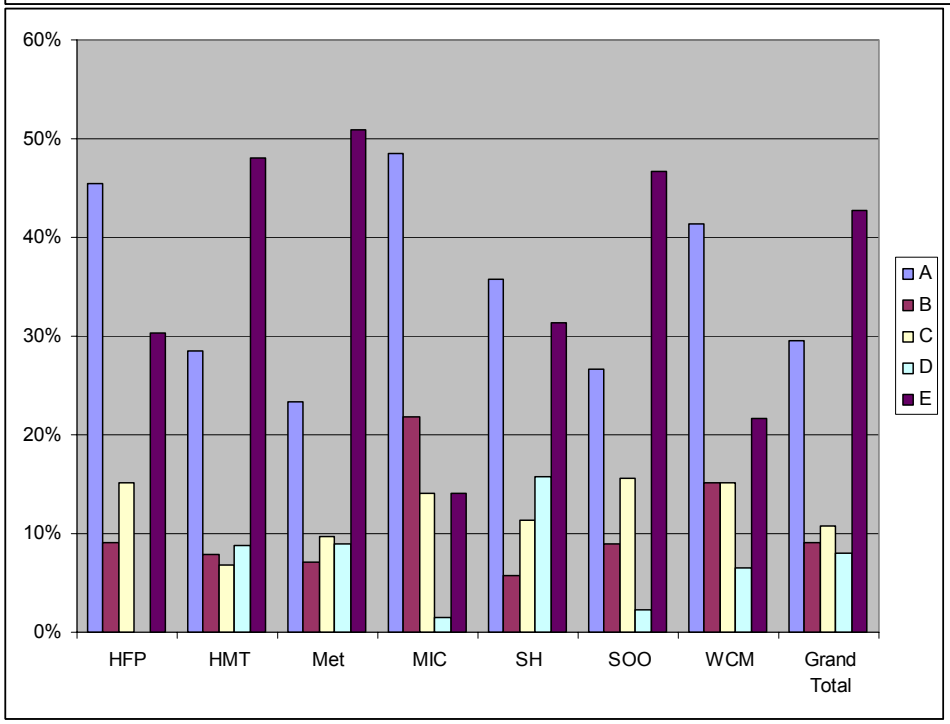
Types of inconsistencies

- **bankfull and flood stage definitions**
- **ASOS/AWOS precip errors**
- **RFC smooths data during convective precip**
- **RFC used automated reading rather than observer**
- **differences in QPF (5)**
- **WFO forecast point lists (4)**
- **rating curves**
- **differences in data sources**
- **stages and forecasts have been different**
- **WFO modification to forecast product does not get to RFC**
- **problems during ice jams**

Question 31: What will be the impact of AHPS?

A. 226 - Improvement
B. 70 - Improvement
C. 84 - No change
D. 63 - More difficult
E. 327 - Unsure
233 text responses





Major comments:

- **Need to provide training both to NWS and external users (15)**
- **make sure the software works properly (not IFPS etc) (11)**
- **Never heard of it or don't know enough about it (11) Many others said it was too soon to make any judgement regarding AHPS until it was available locally**
- **Flood mapping is viewed as important (10) if it can actually be done in an accurate manner**
- **Need to focus more on quality of our existing forecasts (8)**
- **we lack credibility if our existing forecasts are not accurate**
- **success of AHPS will largely depend on accuaracy of products**
  - **will it work for small streams (5)**
  - **will it work in the western US (2)**
- **leave it to the RFCs - the WFOs are already overwhelmed (6)**
- **Are the goals of the program bigger than what it can actually deliver? (4)**

Comments on user reaction

- **A lot of speculation on what users want, need, and can understand**
- **Those who have actually gotten feedback from users have generally been positive**
- **Interent accesssibility is positive**

Other comments

- **Does this make the WFO superfluous in the hydro program**
- **need to keep traditional products**
- **allow WFO early access to products before putting on web**
- **could be degradation of service**

Misunderstandings

It is clear a lot do not understand what AHPS is, such as:

- ***This is a good first step toward enabling the local experts to fix notoriously bad RFC forecasts***
- ***The time could be spent on improvements to basin calibration and modeling***
- ***Topographic maps are ...at intervals of 20 to 100 feet ...How can we map flood outlines with these maps?***
- ***AHPS was described to me by a high ranking CRH member as only being a means to pump funding into the RFCs so they could update model information.***
- ***AHPS just seems like a web version of what we already have in AWIPS.***
- ***If AHPS is to replace outdated and no longer supported Hydromet, ...***

The best quote:

This is a perfect example of RFC scientists inventing self-serving databases and confusing products. They fling them on the WFOs and they don't have to sit in front of people to explain them.

Question 32: Additional comments...
304 text responses

- **Most of the comments were a re-statement of things earlier mentioned in the survey. A lot of emphasis on communication and coordination. Customers are served best when a strong working relationship exists between WFO and RFC.**
- **Many comments on the accountability of WFO for river forecasts that they did not produce and do not have the flexibility to change**
- **Training deficiencies were also noted**
- **Many mentioned that they feel the current system may not be perfect but it is working fairly well. They don't want to abandon the WFO hydro program at a time they are getting the tools to do the job.**
- **Almost all felt that the flash flood program needs to remain at WFO. Less certain about river flood although they tended to favor that**
- **Other comments**
  - **RFCs need to provide better info on when products will be issued particularly during flood situation**
  - **RFCs need to do a better job communicating advances and limitations**
  - **WFO should be more accountable for hydro program. They should be able to do a better job, but don't because hydro program is not taken seriously**
  - **Build WHFS into GIS system and have RFCs also prepare GIS maps usable by WFOs**
  - **RFC forecasters should be included in all flash flood coordination calls**
  - **Several noted improved relations with RFC in past several years**
  - **Overlapping roles for QPF with the advent of IFPS needs to be looked at**
  - **Several mentioned attitude problems with RFCs – viewed as elitist and not wanting to support WFO**
  - **The organization of the RFCs is based on technological demands of the 1960s. RFCs should be creating their own local models and providing more innovative support to WFOs**
  - **Consolidating SH at RFC should be explored and possibly prototyped**
  - **Need 2-way communication to provide RFC reasoning/certainty**
  - **Method of assessing RFC effectiveness needs to be established**
  - **RFC ability to support a dam break, especially after hours**
  - **Those offices supported by multiple RFCs often noted differences in services, procedures, and attitudes**